0070607 2251S960

FIG.1 PRIOR ART

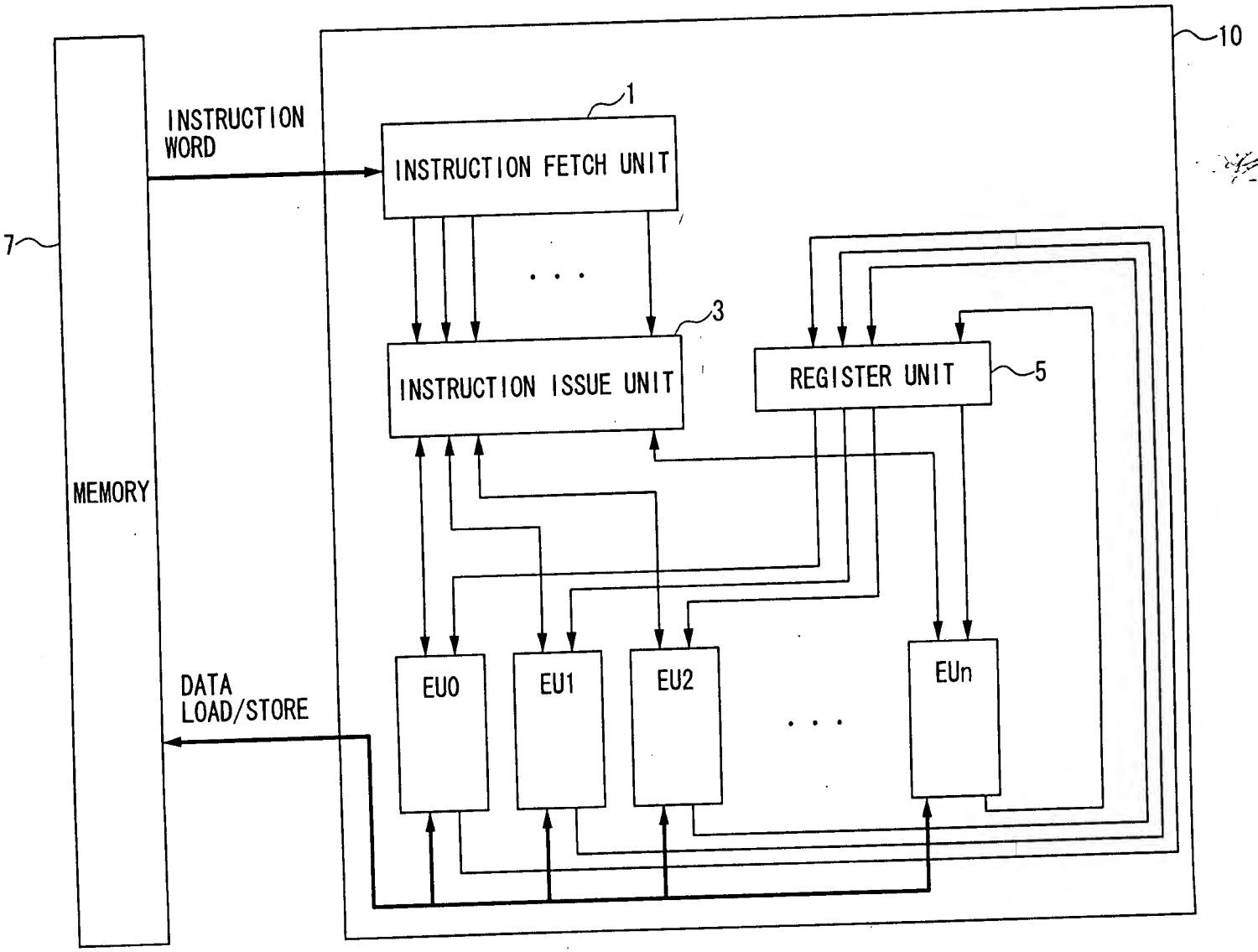


FIG.2

NOP	NOP	NOP	NOP
E1	NOP	NOP	NOP
NOP	E1	NOP	NOP
NOP	NOP	E1	NOP
NOP	NOP	NOP	E1
E1	E1	NOP	NOP
E1	NOP	E1	NOP
E1	NOP	NOP	E1
NOP	E1	E1	NOP
NOP	E1	NOP	E1
NOP	NOP	E1	E1
E1	E1	E1	NOP
E1	E1	NOP	E1
E1	NOP	E1	E1
NOP	E1	E1	E1
E1	E1	E1	E1

0070602 "2554960

FIG.3

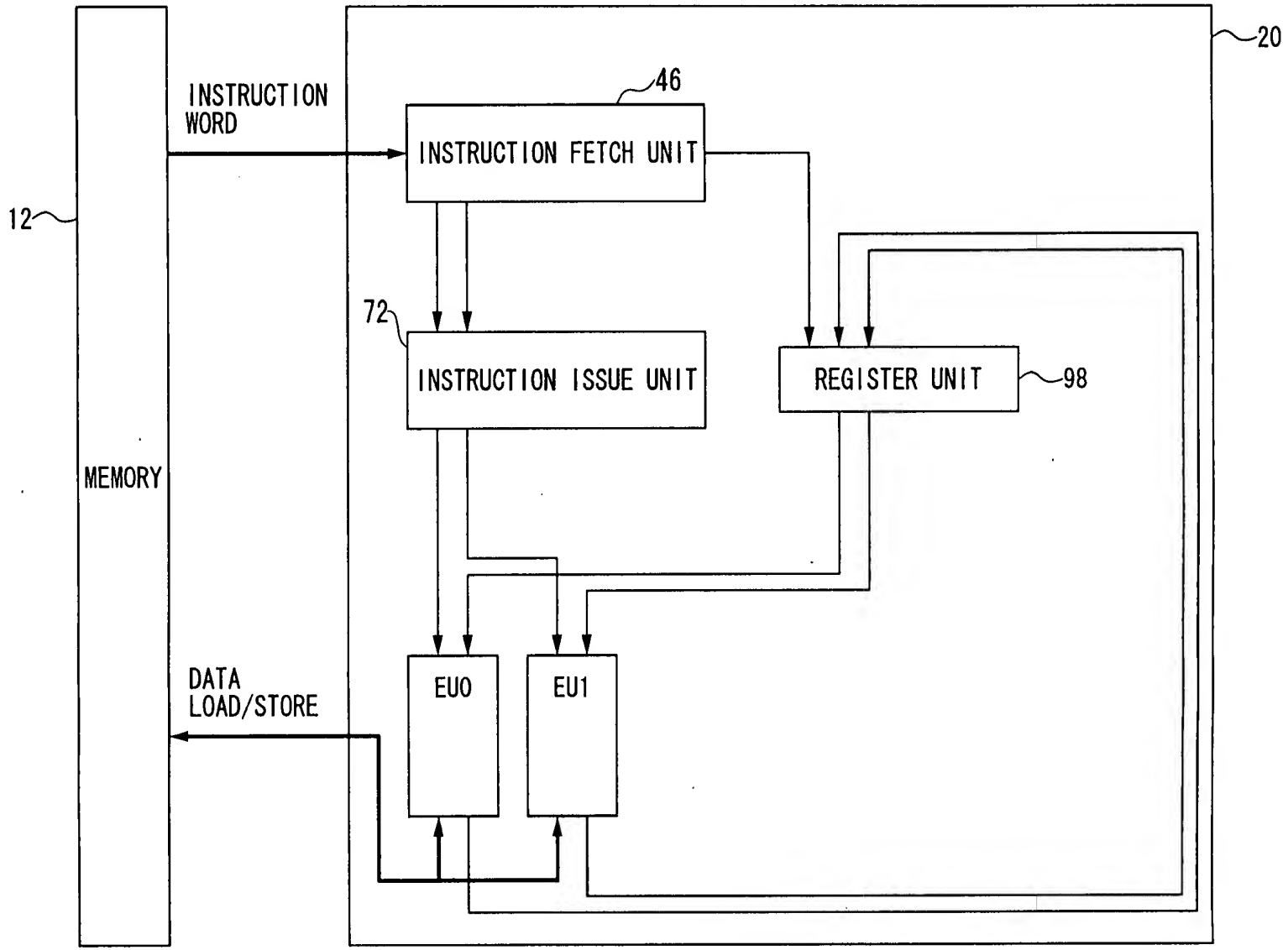

20
46
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
72
INSTRUCTION ISSUE UNIT
REGISTER UNIT
98
MEMORY
DATA LOAD/STORE
EU0
EU1

FIG.4

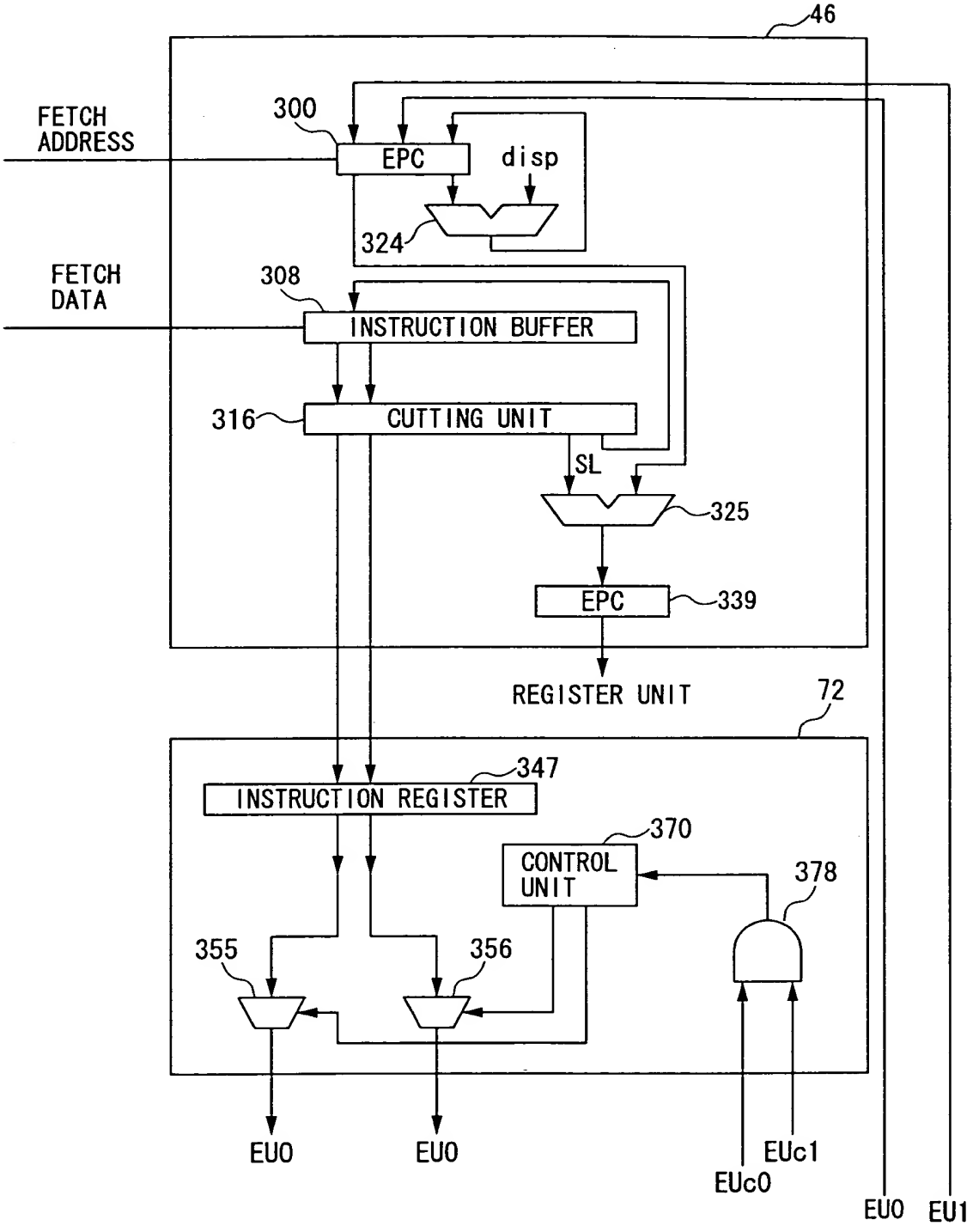

46
FETCH ADDRESS
300
EPC
disp
324
FETCH DATA
308
INSTRUCTION BUFFER
316
CUTTING UNIT
SL
325
EPC
339
REGISTER UNIT
72
347
INSTRUCTION REGISTER
370
CONTROL UNIT
378
355
356
EU0
EU0
EUc0
EUc1
EU0
EU1

FIG. 5

0	EI	1	EI
1	EI		

0955452 0907100

FIG.6

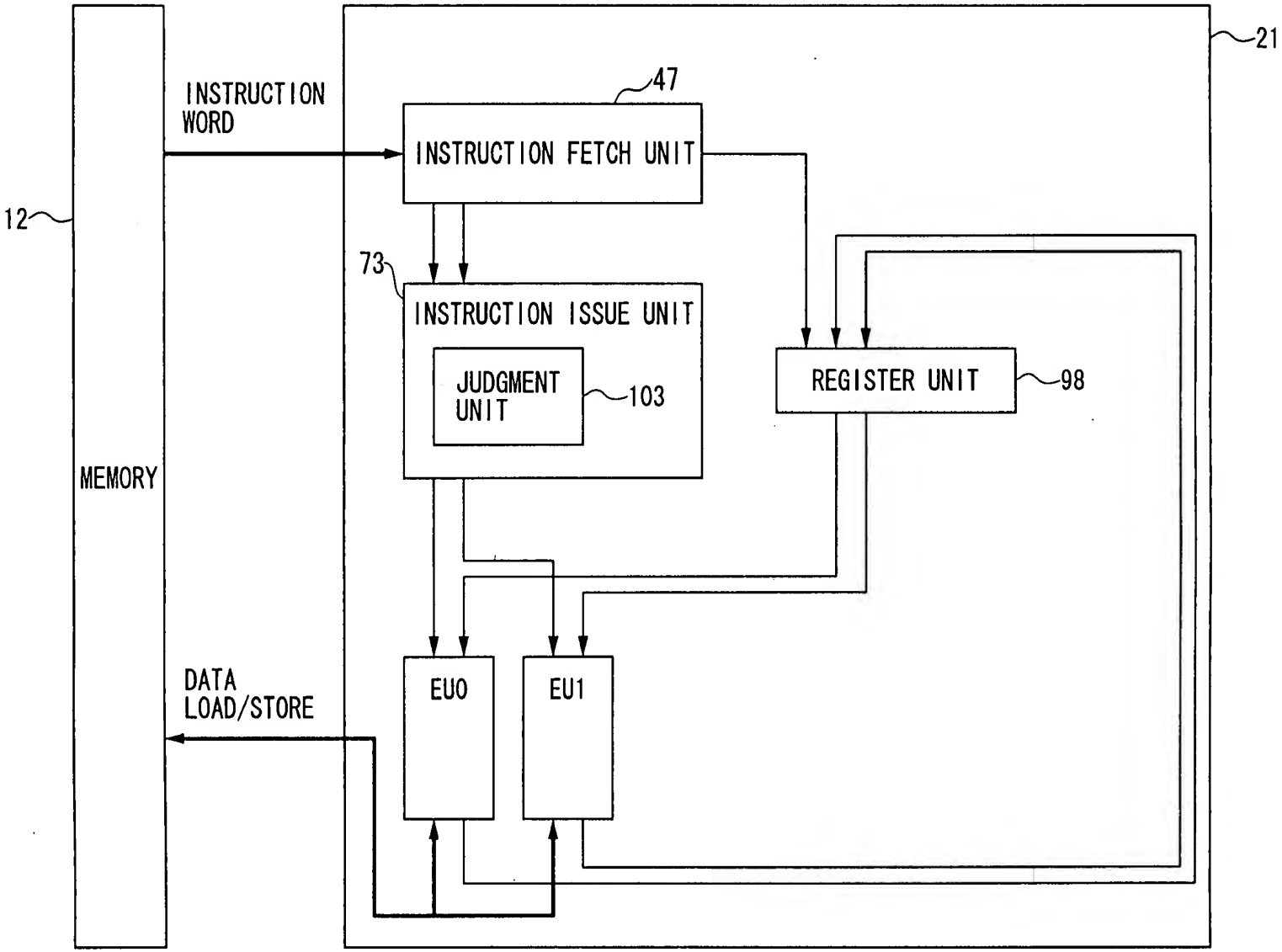

21
47
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
73
INSTRUCTION ISSUE UNIT
JUDGMENT UNIT
103
REGISTER UNIT
98
MEMORY
DATA LOAD/STORE
EU0
EU1

FIG.7

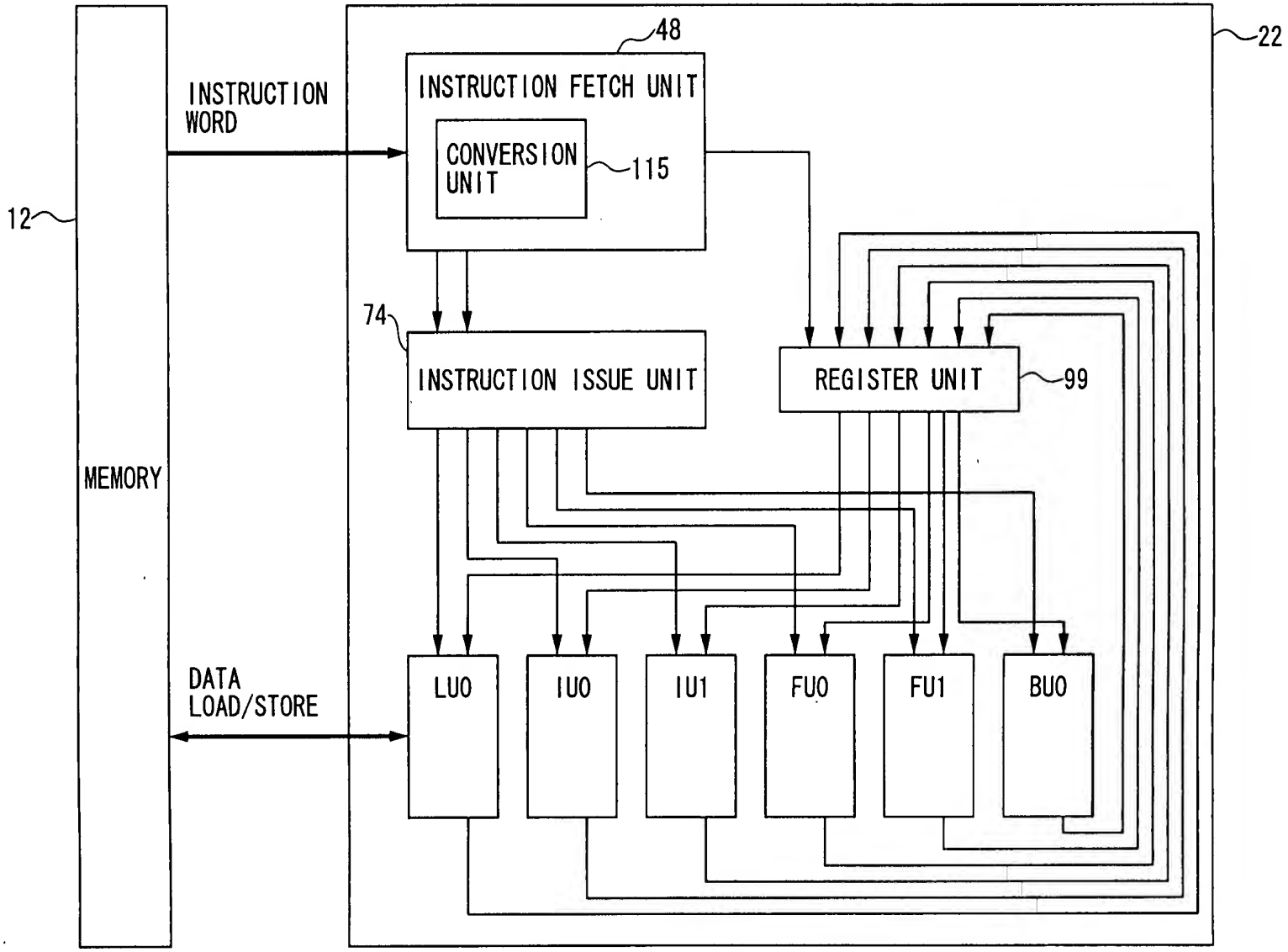
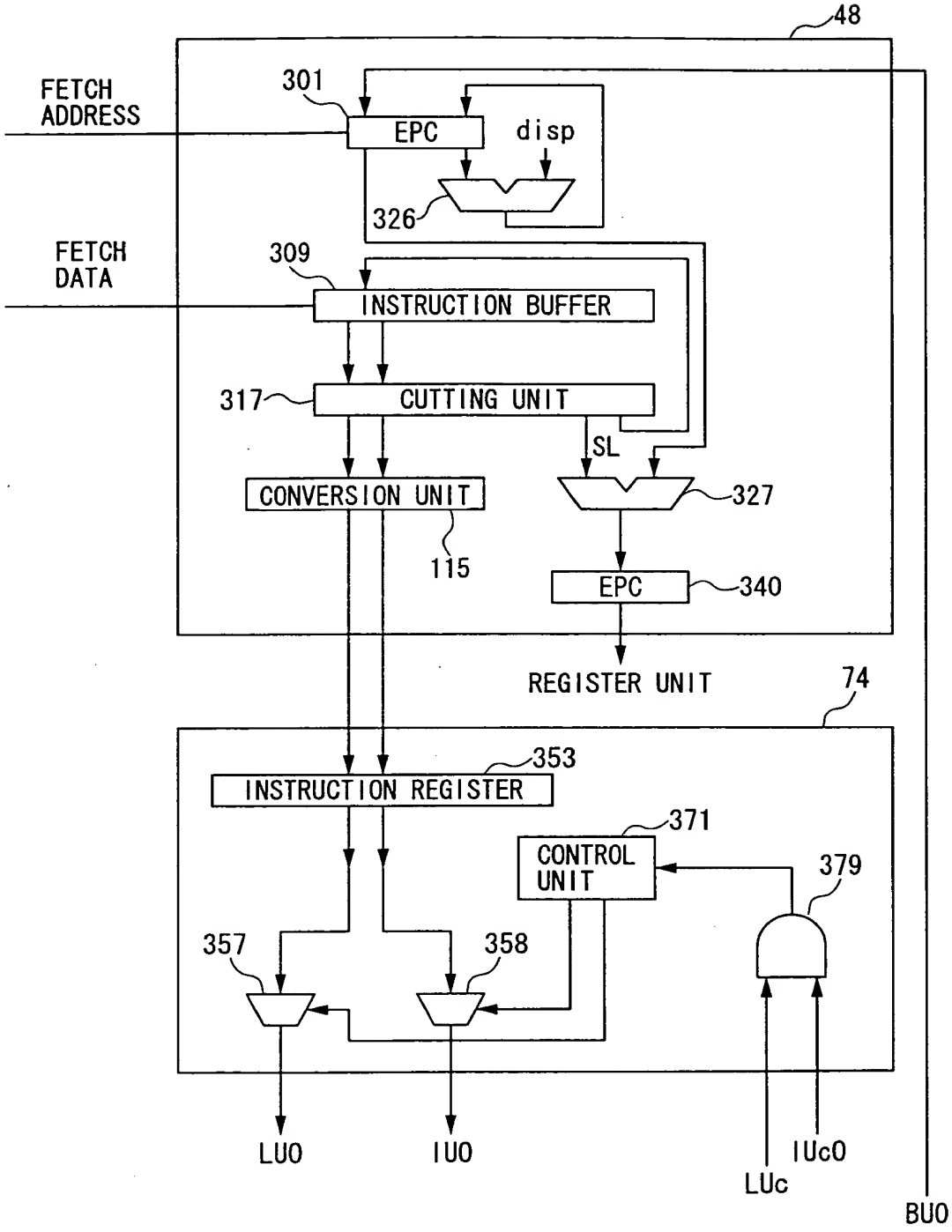

48
22
INSTRUCTION FETCH UNIT
CONVERSION UNIT
115
INSTRUCTION WORD
12
74
INSTRUCTION ISSUE UNIT
REGISTER UNIT
99
MEMORY
DATA LOAD/STORE
LU0
IU0
IU1
FU0
FU1
BU0

FIG.8



0070650 "2254950

0070450 "2547950

FIG. 9

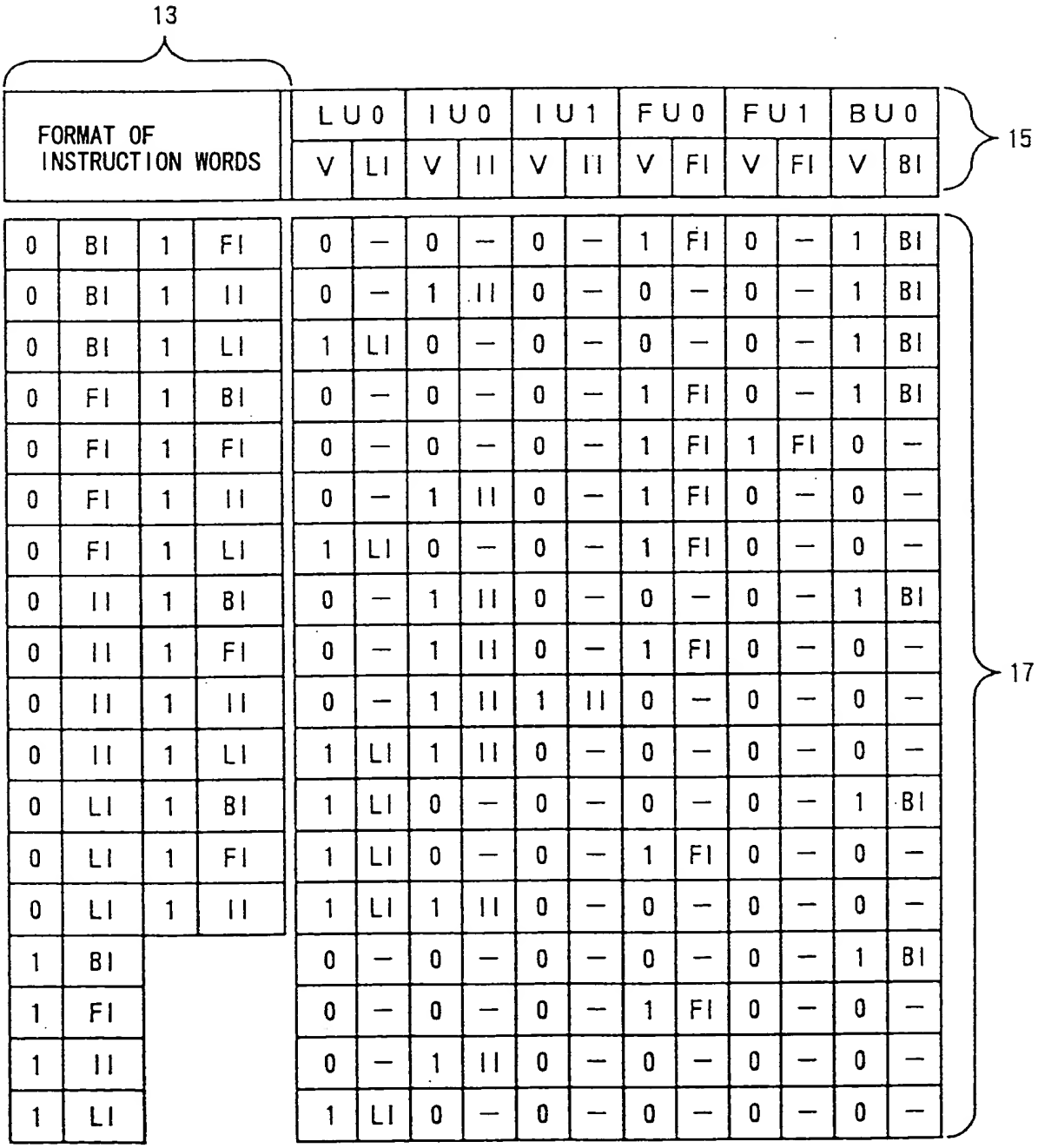


FIG.10

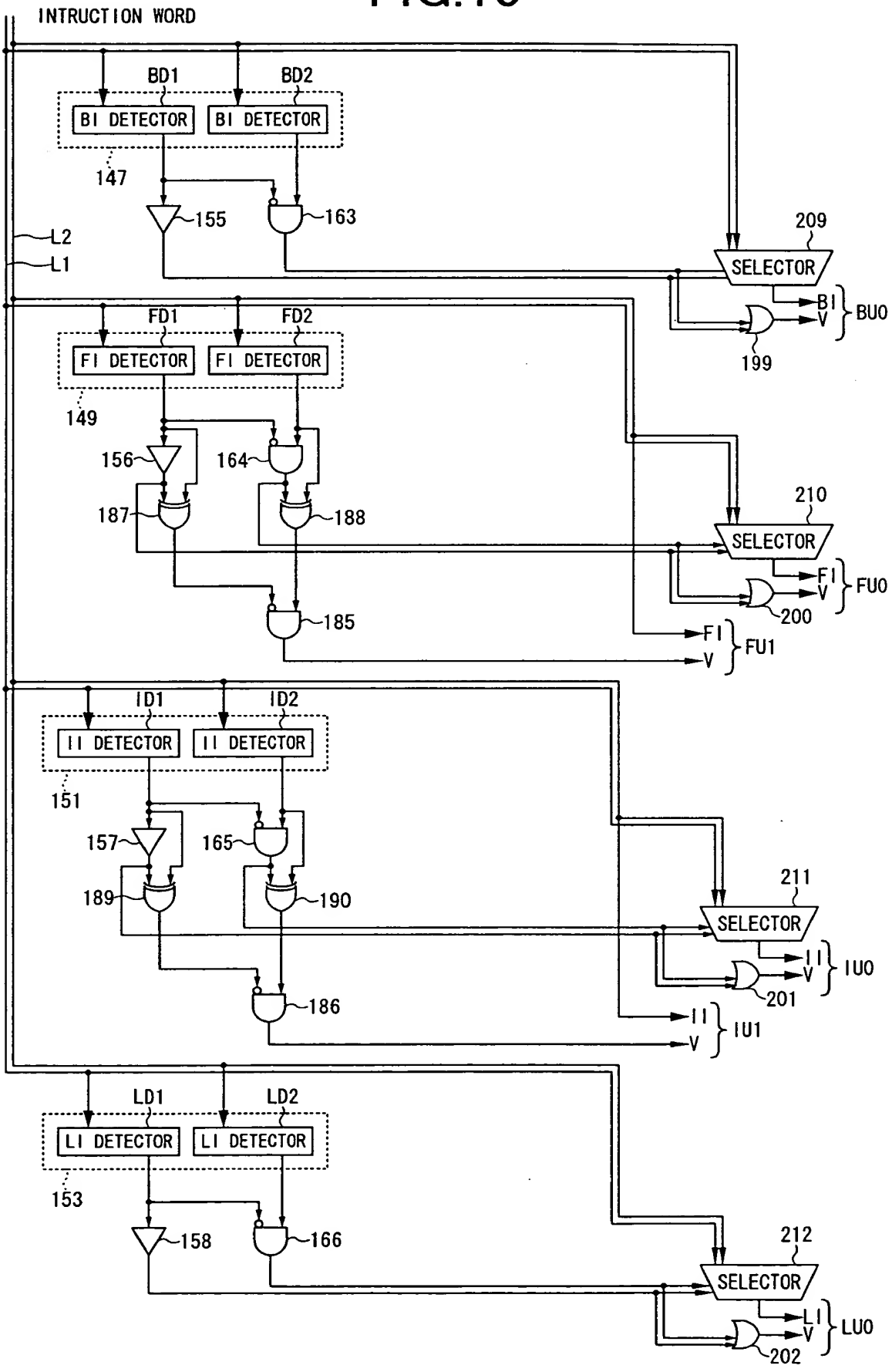

INTRUCTION WORD
BD1
BD2
BI DETECTOR
BI DETECTOR
147
155
163
L2
L1
209
SELECTOR
BI
V
BU0
199
FD1
FD2
FI DETECTOR
FI DETECTOR
149
156
164
187
188
210
SELECTOR
FI
V
FU0
200
185
FI
V
FU1
ID1
ID2
II DETECTOR
II DETECTOR
151
157
165
189
190
211
SELECTOR
II
V
IU0
201
186
II
V
IU1
LD1
LD2
LI DETECTOR
LI DETECTOR
153
158
166
212
SELECTOR
LI
V
LU0
202

FIG.11

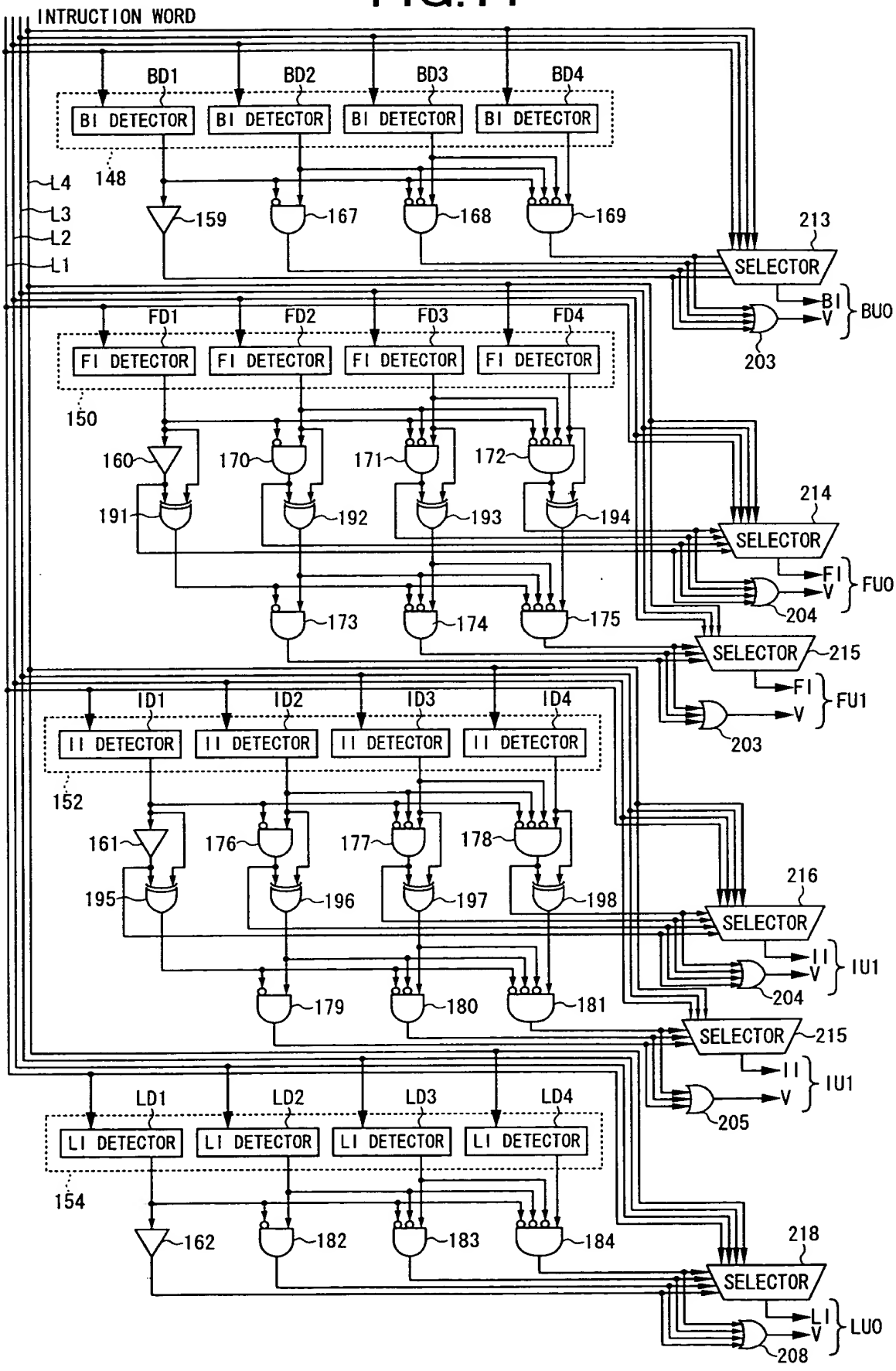
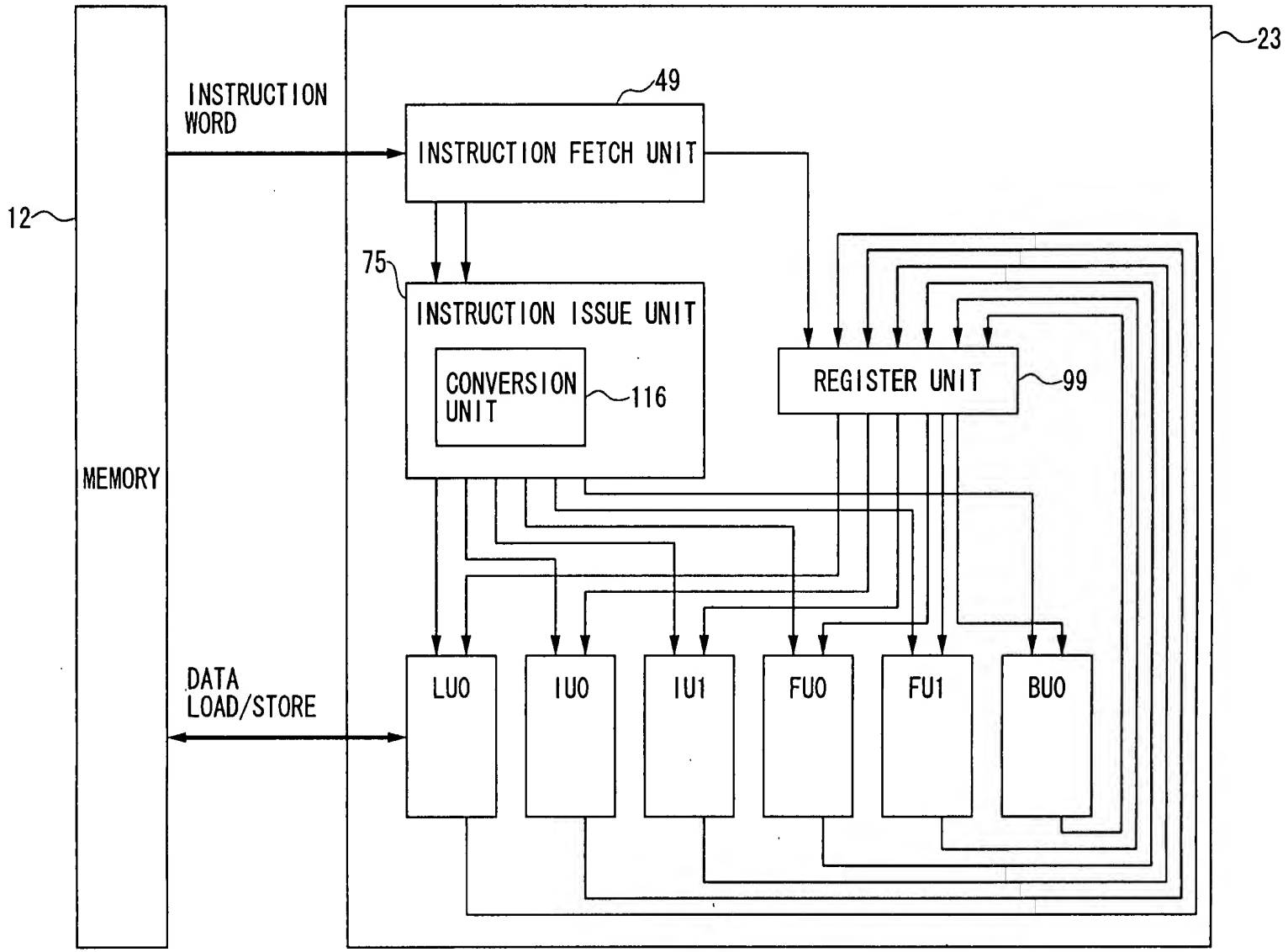

INTRUCTION WORD
BD1
BD2
BD3
BD4
BI DETECTOR
BI DETECTOR
BI DETECTOR
BI DETECTOR
148
L4
L3
L2
L1
159
167
168
169
213
SELECTOR
BI
V
BUO
203
FD1
FD2
FD3
FD4
FI DETECTOR
FI DETECTOR
FI DETECTOR
FI DETECTOR
150
160
170
171
172
191
192
193
194
214
SELECTOR
FI
V
FUO
204
173
174
175
SELECTOR
215
FI
V
FU1
203
ID1
ID2
ID3
ID4
II DETECTOR
II DETECTOR
II DETECTOR
II DETECTOR
152
161
176
177
178
195
196
197
198
216
SELECTOR
II
V
IU1
204
179
180
181
SELECTOR
215
II
V
IU1
205
LD1
LD2
LD3
LD4
LI DETECTOR
LI DETECTOR
LI DETECTOR
LI DETECTOR
154
162
182
183
184
218
SELECTOR
LI
V
LUO
208

FIG.12


23
49
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
75
INSTRUCTION ISSUE UNIT
CONVERSION UNIT
116
REGISTER UNIT
99
MEMORY
DATA LOAD/STORE
LU0
IU0
IU1
FU0
FU1
BU0

0057050 "25"55250

FIG.13

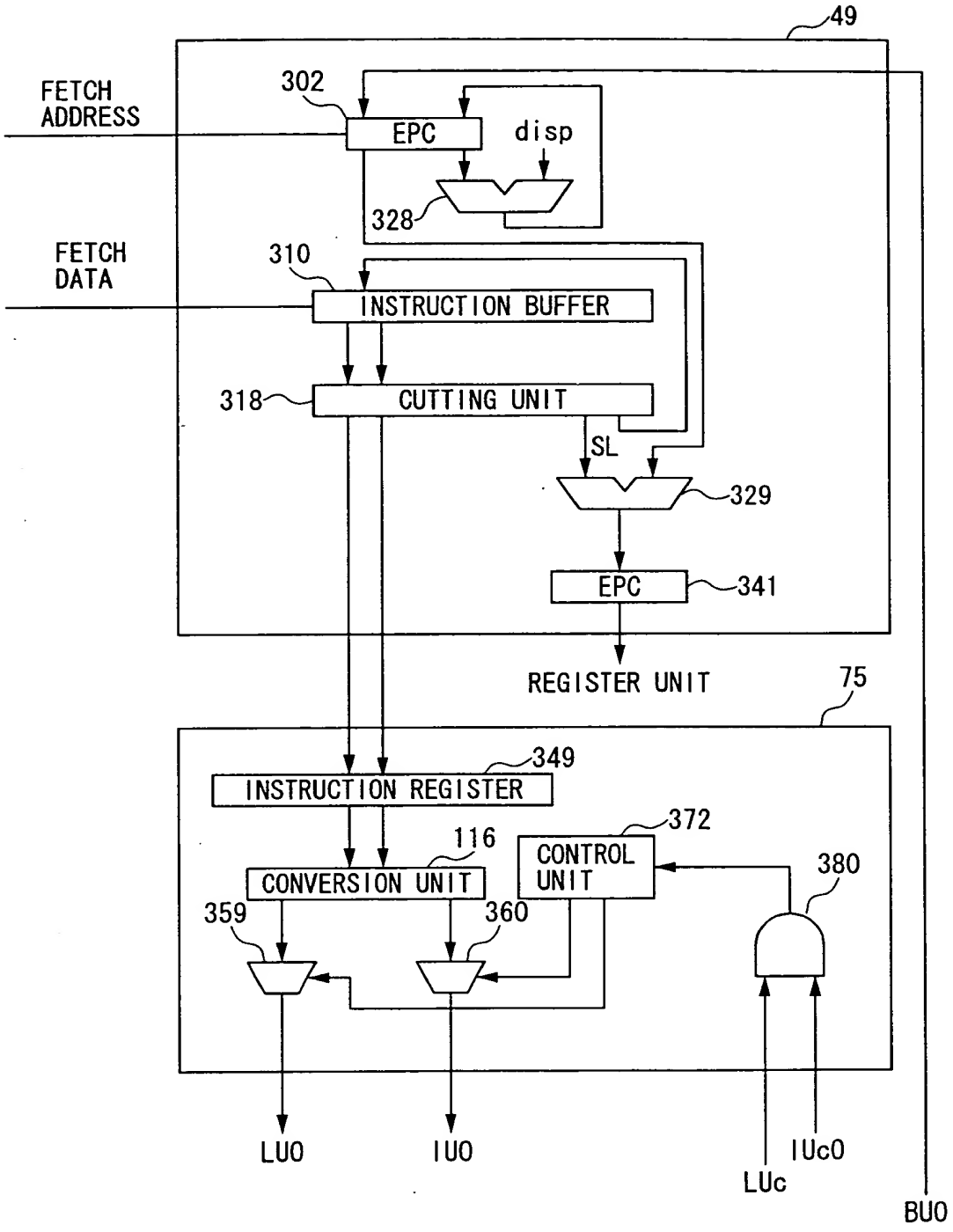


FIG.14

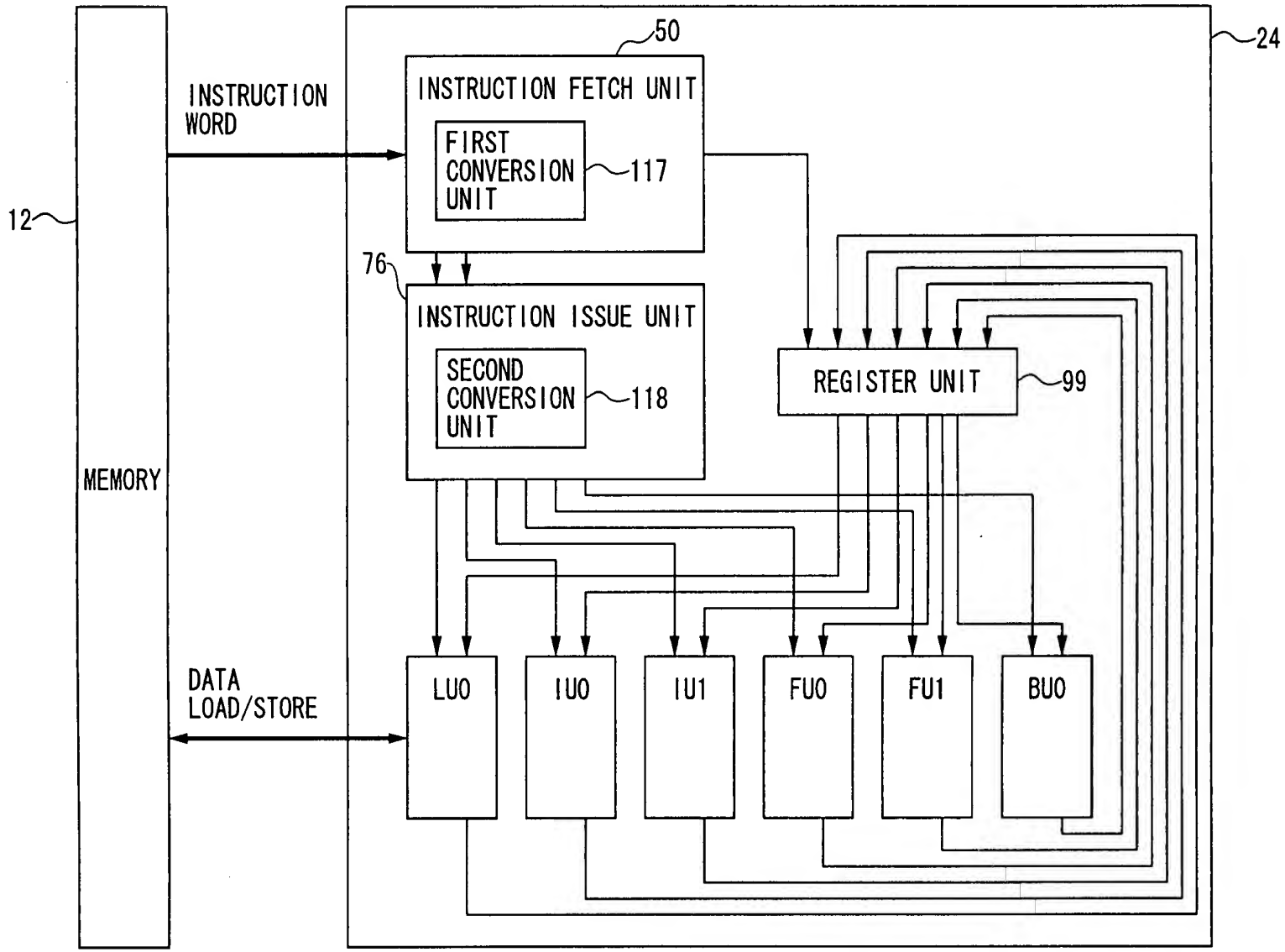

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
50
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
117
76
INSTRUCTION ISSUE UNIT
SECOND CONVERSION UNIT
118
REGISTER UNIT
99
24
LU0
IU0
IU1
FU0
FU1
BU0

FIG.15

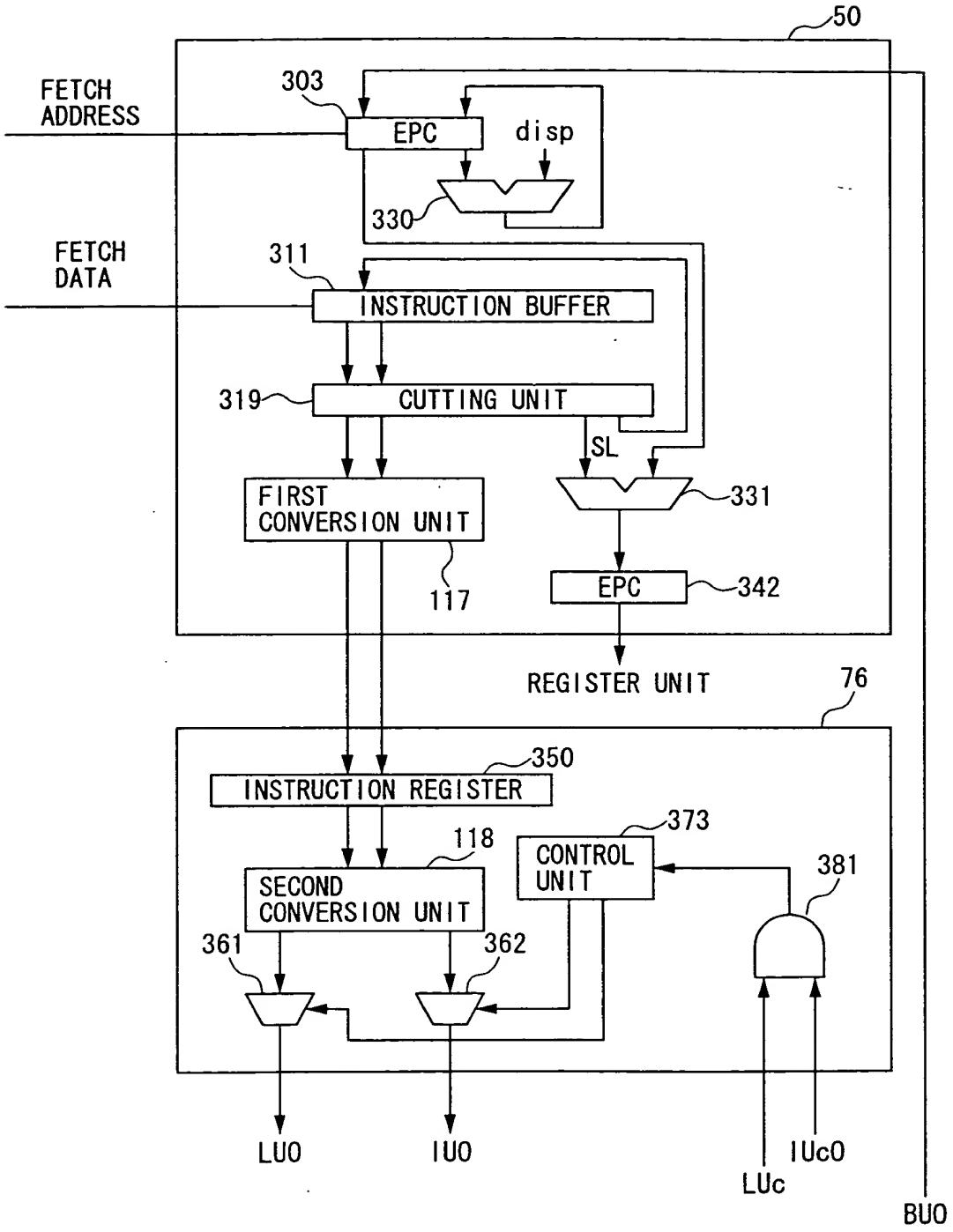

50
FETCH ADDRESS
303
EPC
disp
330
FETCH DATA
311
INSTRUCTION BUFFER
319
CUTTING UNIT
SL
FIRST CONVERSION UNIT
117
331
EPC
342
REGISTER UNIT
76
350
INSTRUCTION REGISTER
373
118
CONTROL UNIT
381
SECOND CONVERSION UNIT
361
362
LUO
IUO
LUc
IUcO
BUO

FIG.16

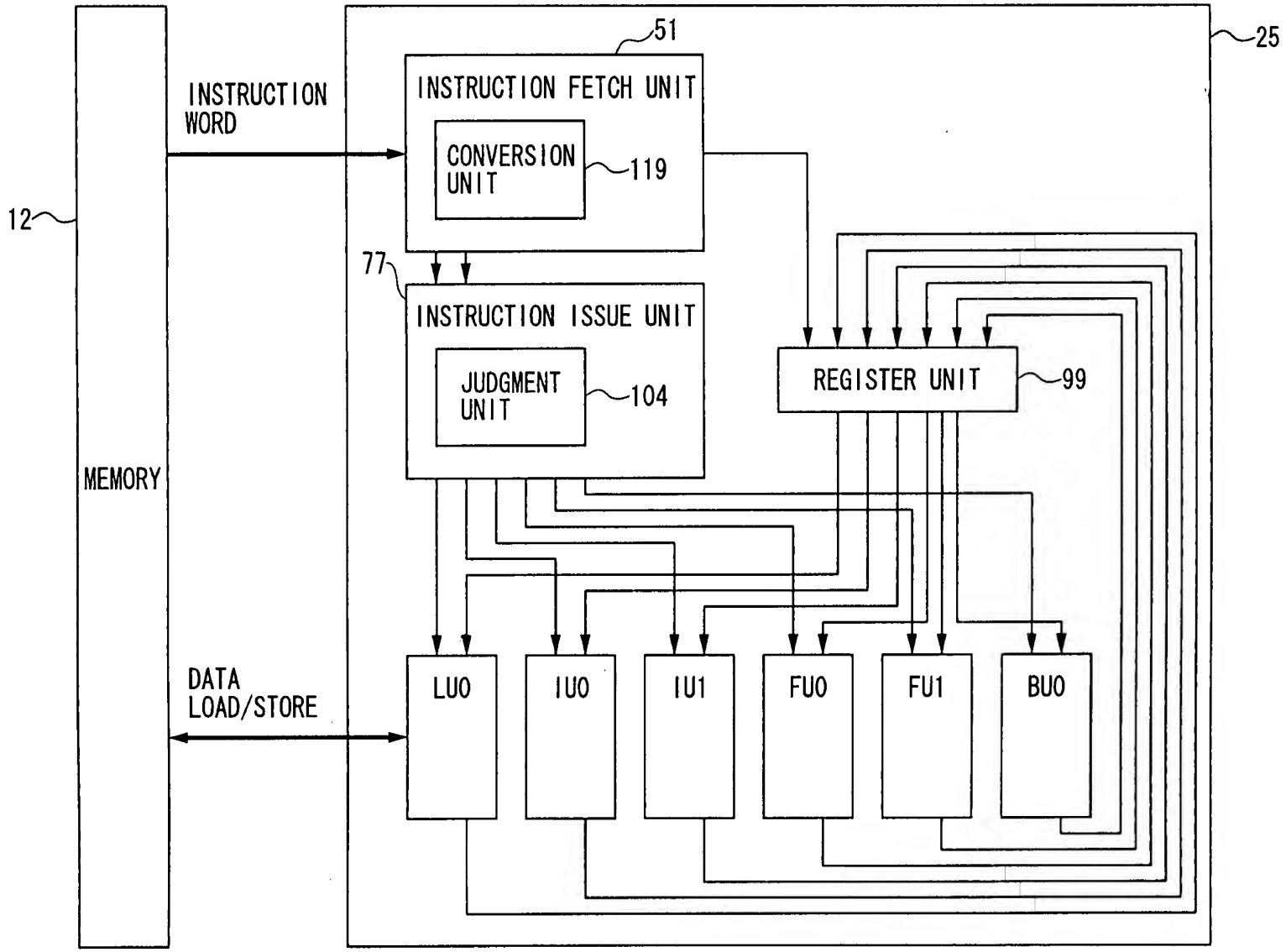

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
25
51
INSTRUCTION FETCH UNIT
CONVERSION UNIT
119
77
INSTRUCTION ISSUE UNIT
JUDGMENT UNIT
104
REGISTER UNIT
99
LU0
IU0
IU1
FU0
FU1
BU0

FIG.17

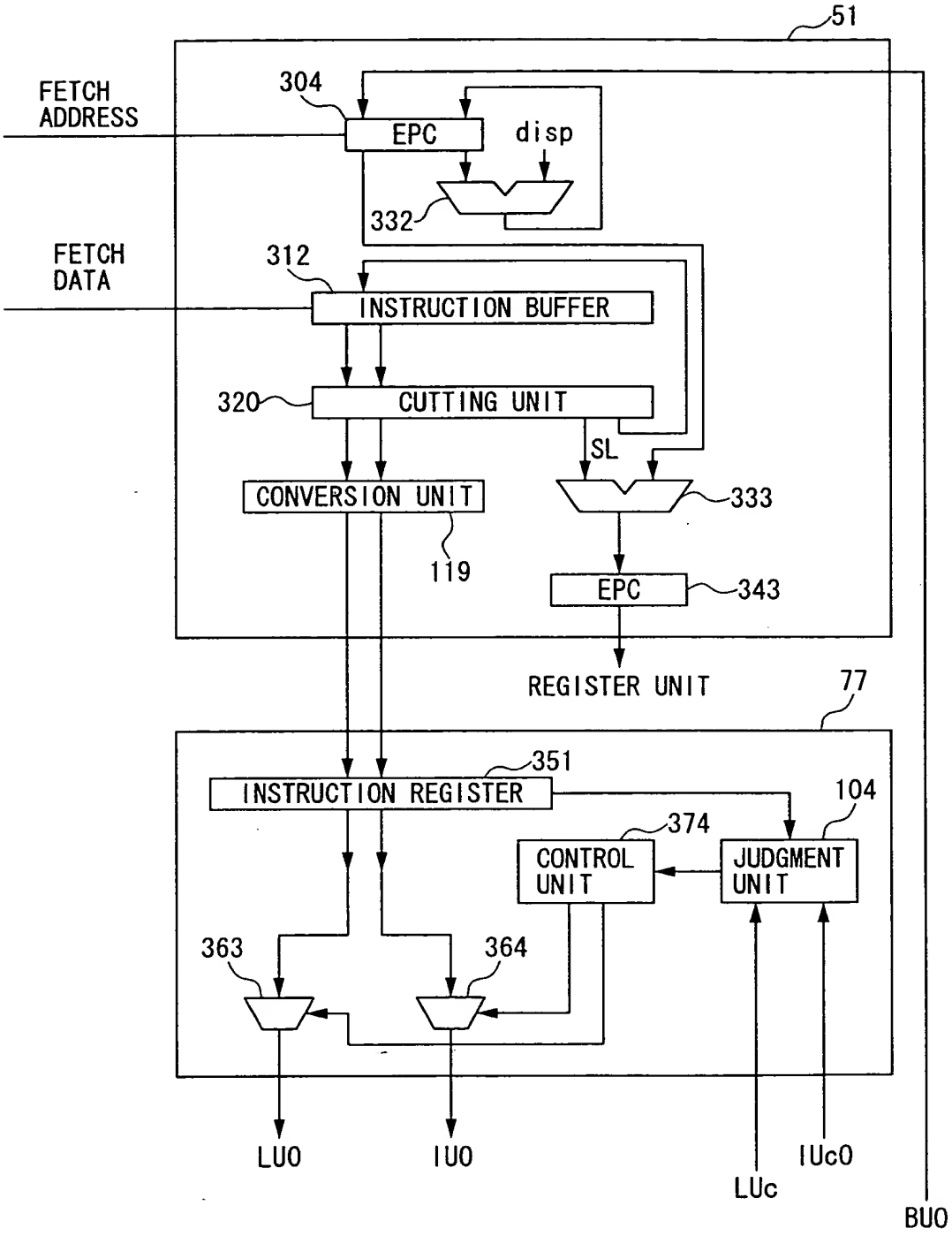

51
FETCH ADDRESS
304
EPC
disp
332
FETCH DATA
312
INSTRUCTION BUFFER
320
CUTTING UNIT
SL
CONVERSION UNIT
333
119
EPC
343
REGISTER UNIT
77
351
INSTRUCTION REGISTER
104
374
CONTROL UNIT
JUDGMENT UNIT
363
364
LUO
IUO
LUc
IUcO
BUO

FIG.18

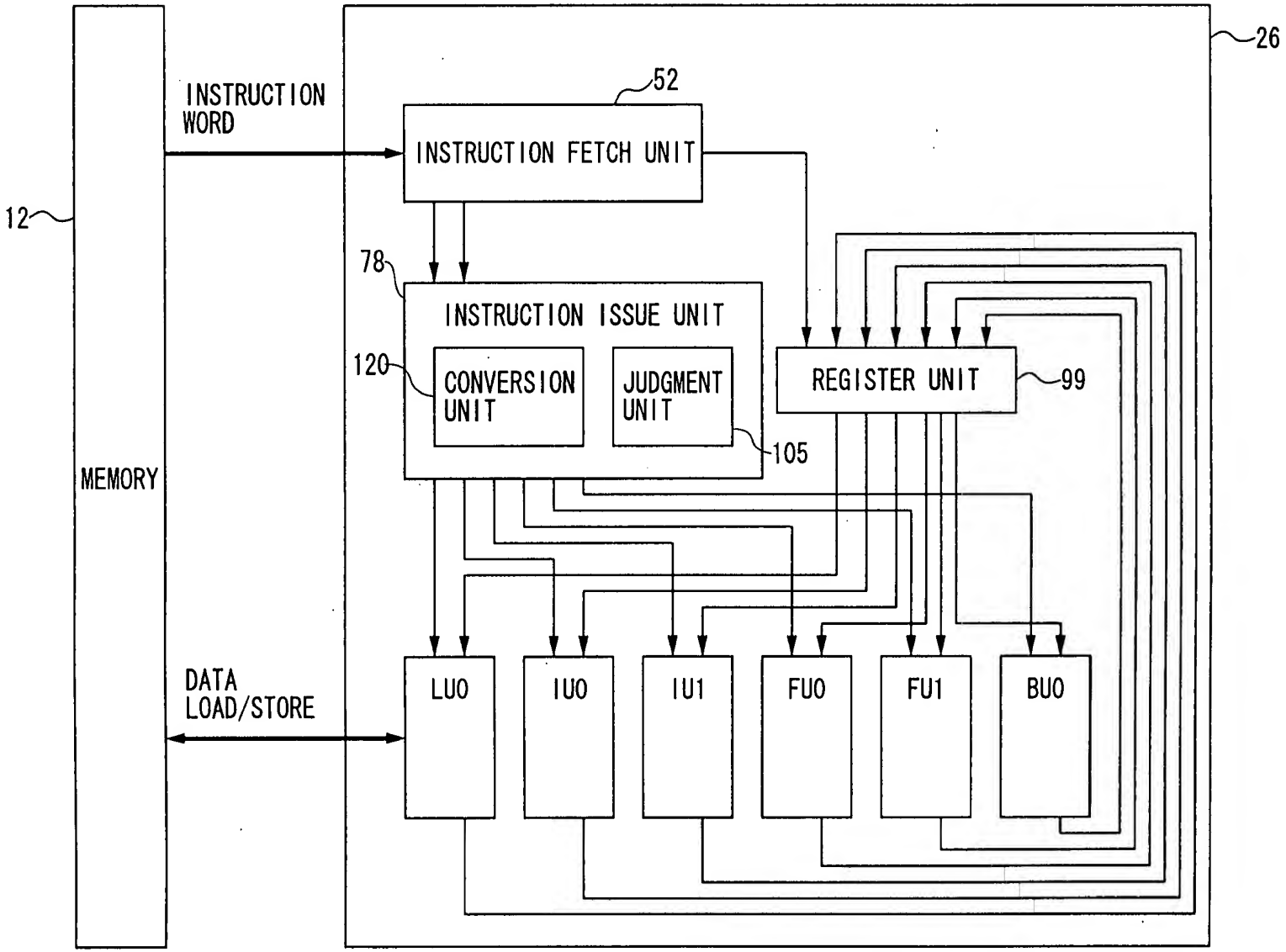

26
52
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
78
INSTRUCTION ISSUE UNIT
120
CONVERSION UNIT
JUDGMENT UNIT
105
REGISTER UNIT
99
MEMORY
DATA LOAD/STORE
LU0
IU0
IU1
FU0
FU1
BU0

FIG.19

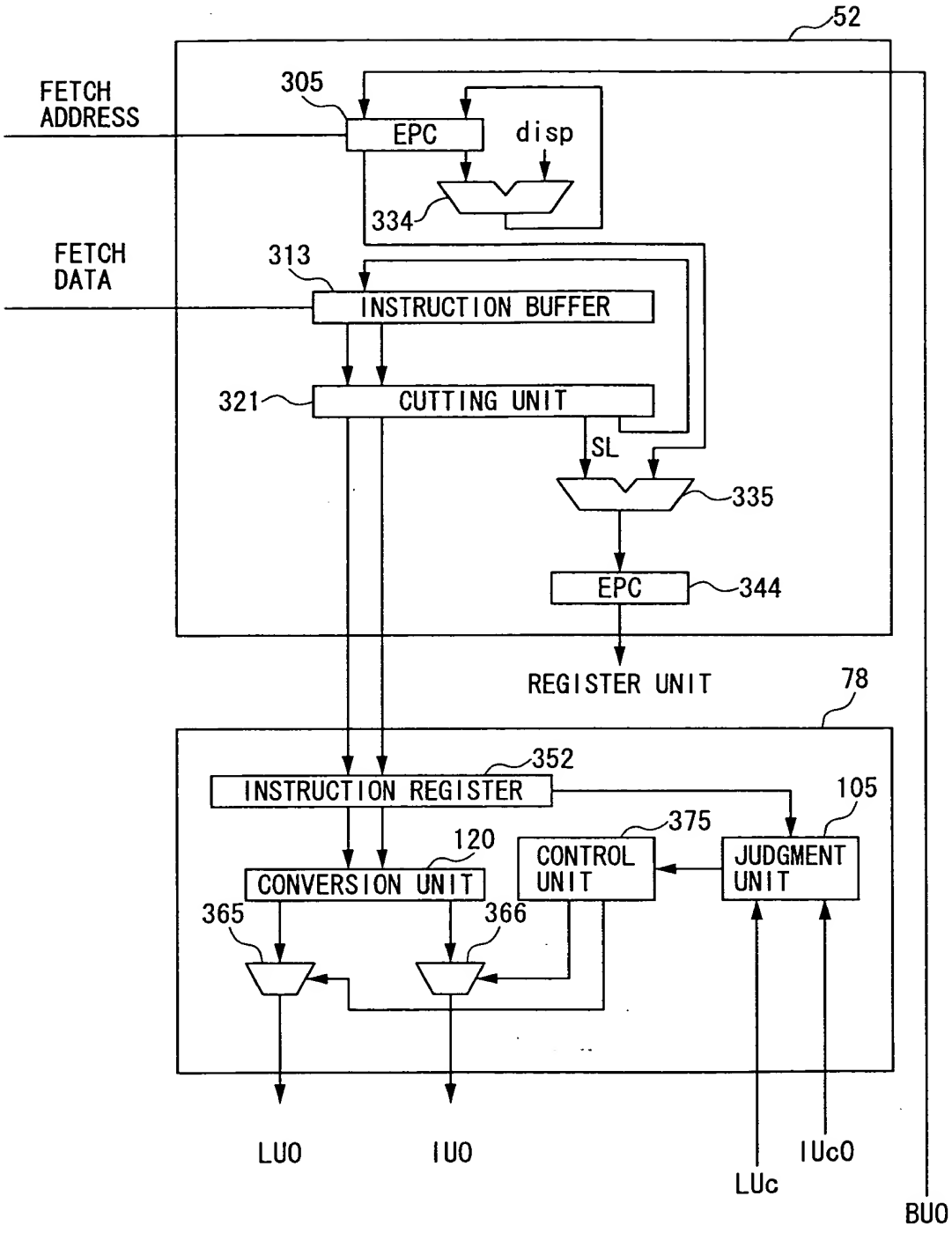

52
FETCH ADDRESS
305
EPC
disp
334
FETCH DATA
313
INSTRUCTION BUFFER
321
CUTTING UNIT
SL
335
EPC
344
REGISTER UNIT
78
352
INSTRUCTION REGISTER
105
375
120
CONTROL UNIT
JUDGMENT UNIT
CONVERSION UNIT
365
366
LUO
IUO
LUc
IUcO
BUO

FIG.20

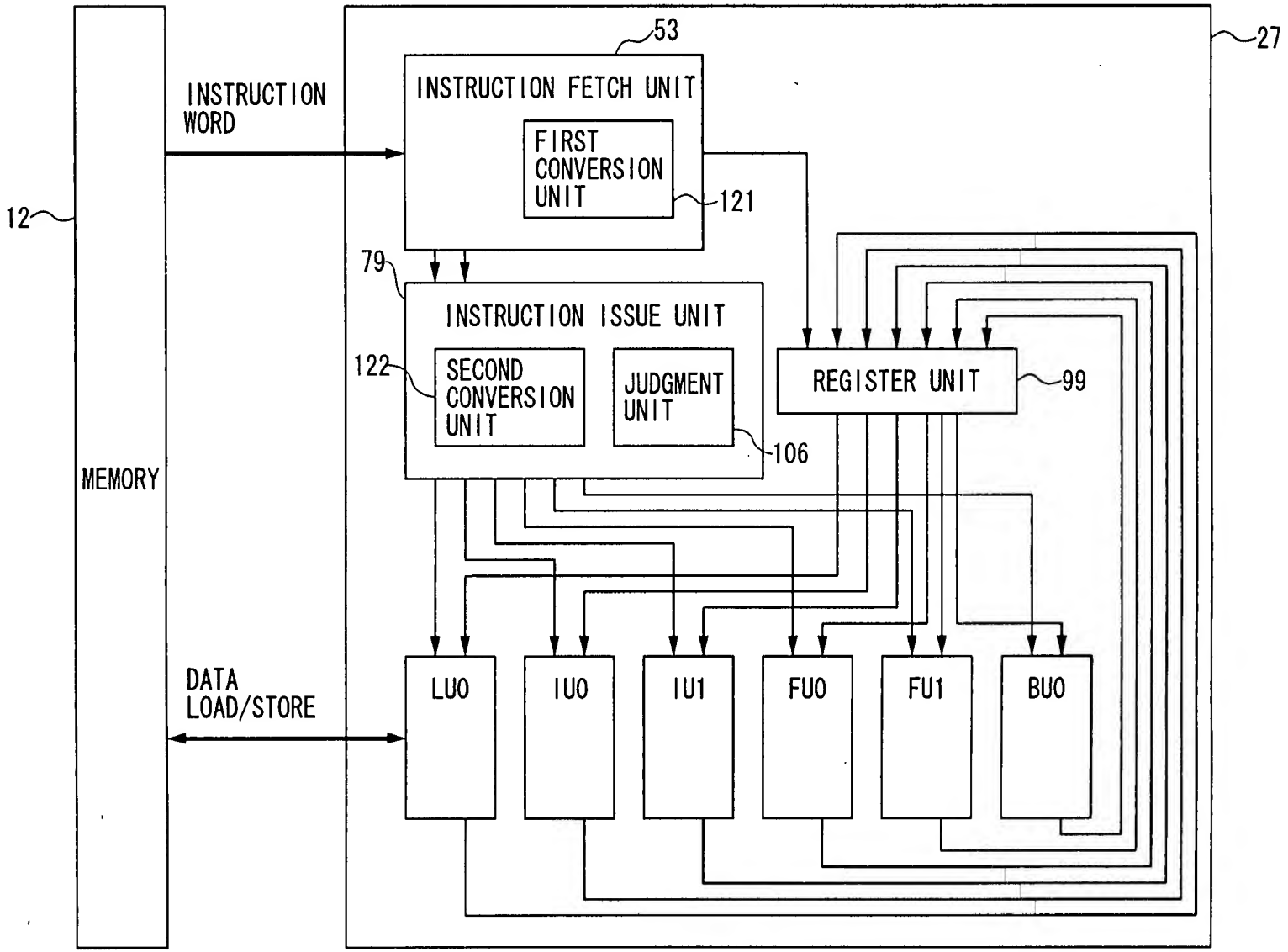

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
53
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
121
79
INSTRUCTION ISSUE UNIT
122
SECOND CONVERSION UNIT
JUDGMENT UNIT
106
REGISTER UNIT
99
27
LU0
IU0
IU1
FU0
FU1
BU0

FIG.21

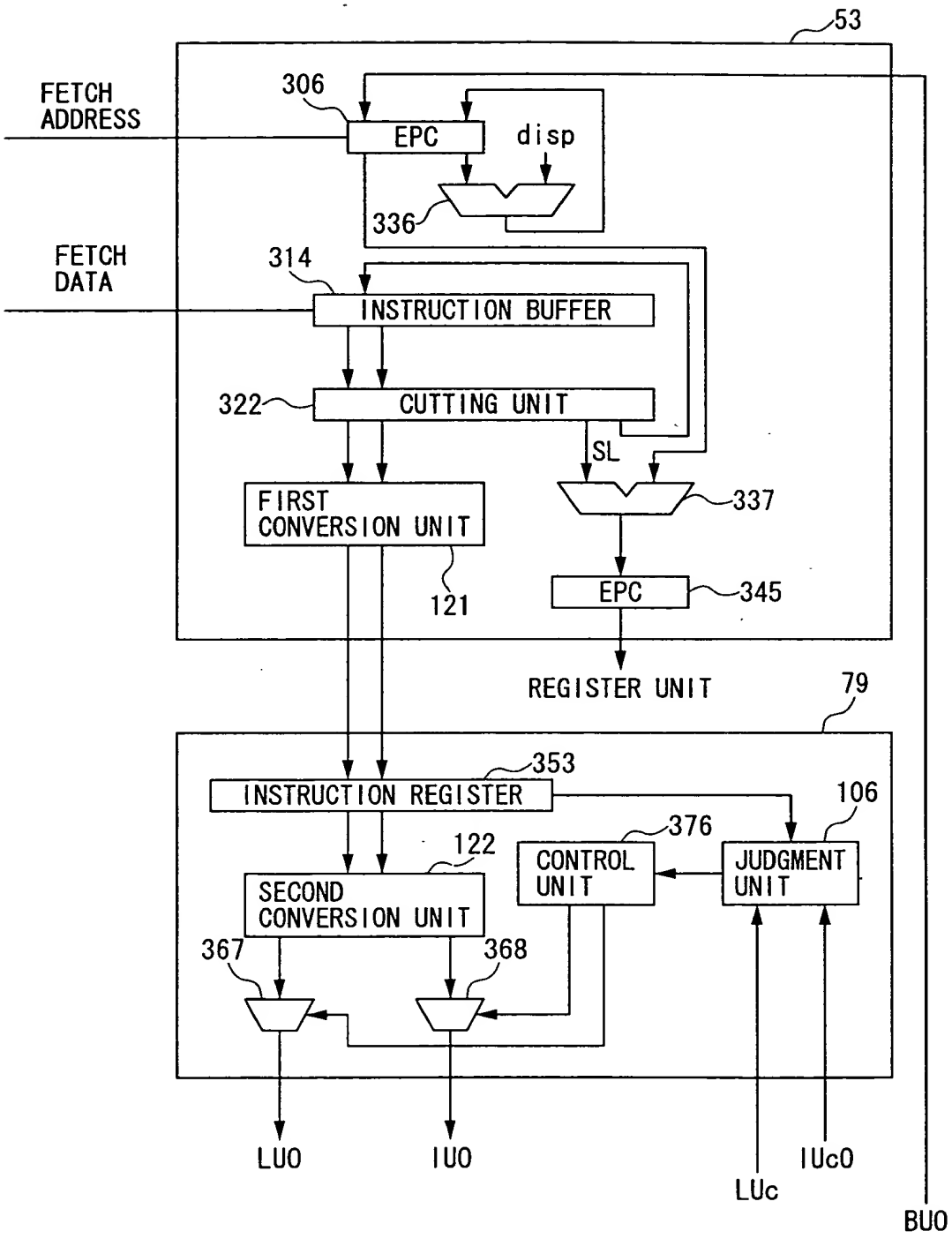

53
FETCH ADDRESS
306
EPC
disp
336
FETCH DATA
314
INSTRUCTION BUFFER
322
CUTTING UNIT
SL
337
FIRST CONVERSION UNIT
121
EPC
345
REGISTER UNIT
79
353
INSTRUCTION REGISTER
106
376
122
CONTROL UNIT
JUDGMENT UNIT
SECOND CONVERSION UNIT
367
368
LUO
IUO
LUc
IUcO
BUO

FIG.22

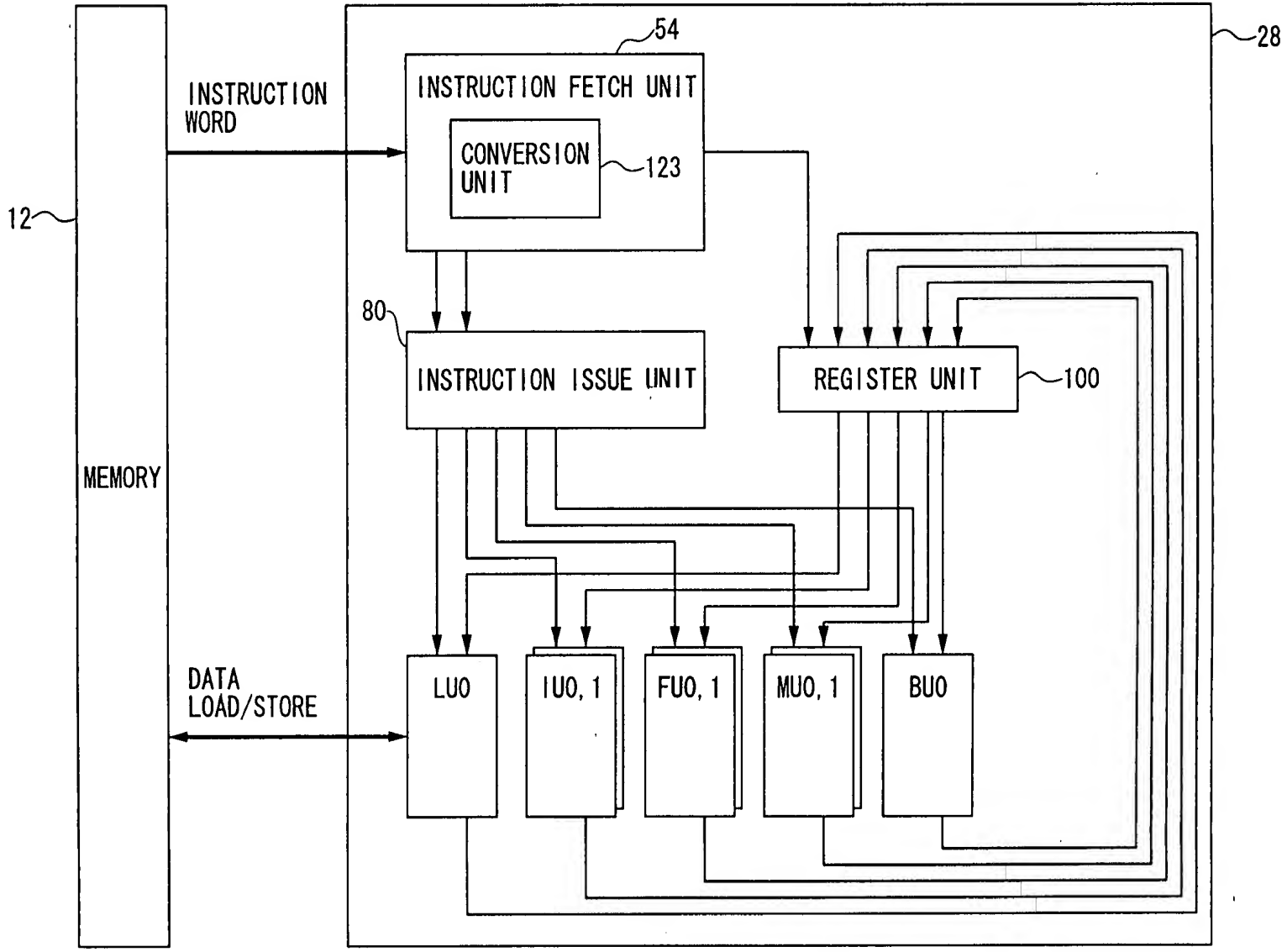

54
28
INSTRUCTION FETCH UNIT
INSTRUCTION WORD
CONVERSION UNIT
123
12
80
INSTRUCTION ISSUE UNIT
REGISTER UNIT
100
MEMORY
DATA LOAD/STORE
LU0
IU0, 1
FU0, 1
MU0, 1
BU0

FIG.23

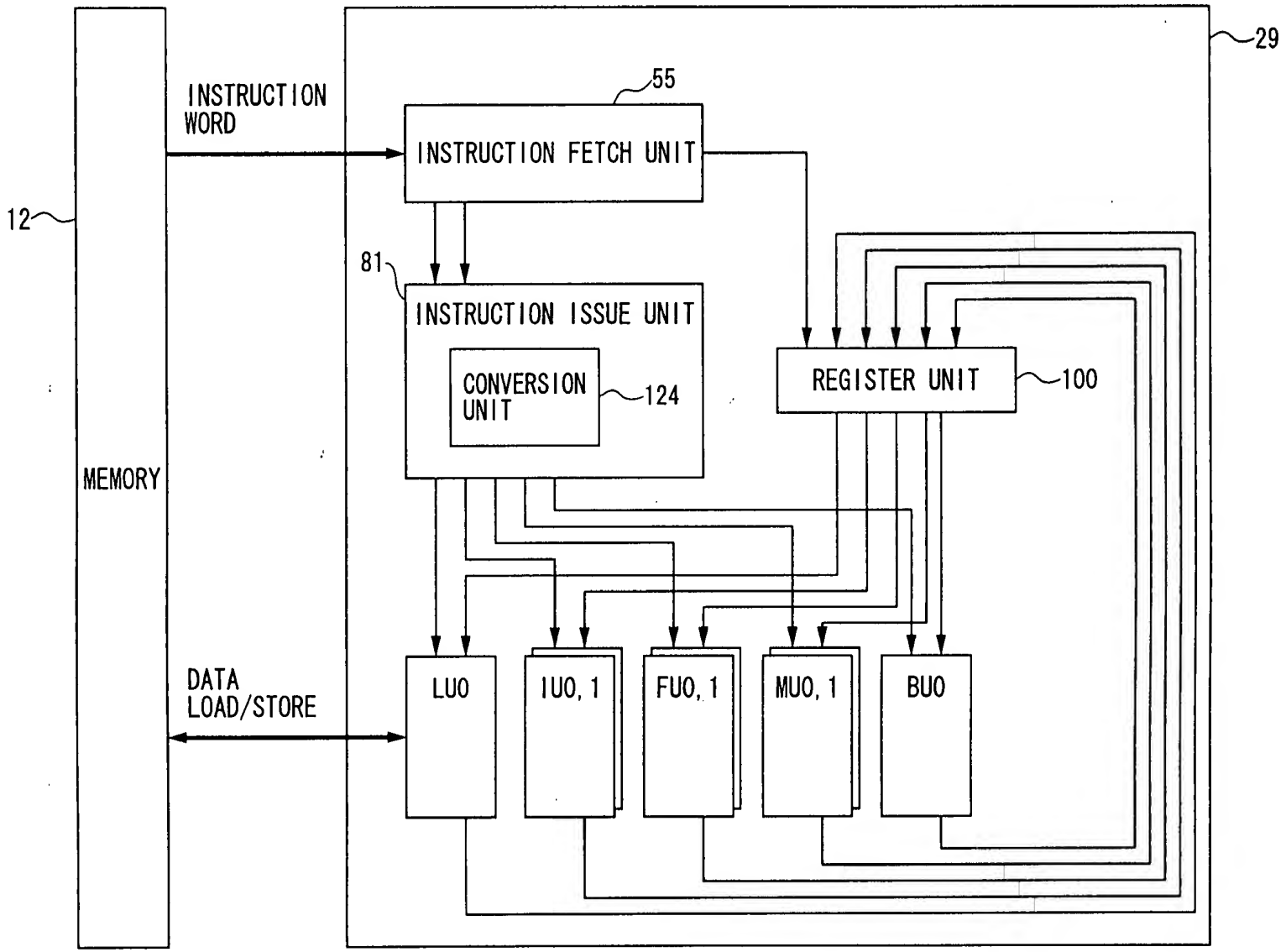

29
55
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
81
INSTRUCTION ISSUE UNIT
CONVERSION UNIT
124
REGISTER UNIT
100
MEMORY
DATA LOAD/STORE
LU0
IU0, 1
FU0, 1
MU0, 1
BU0

FIG.24

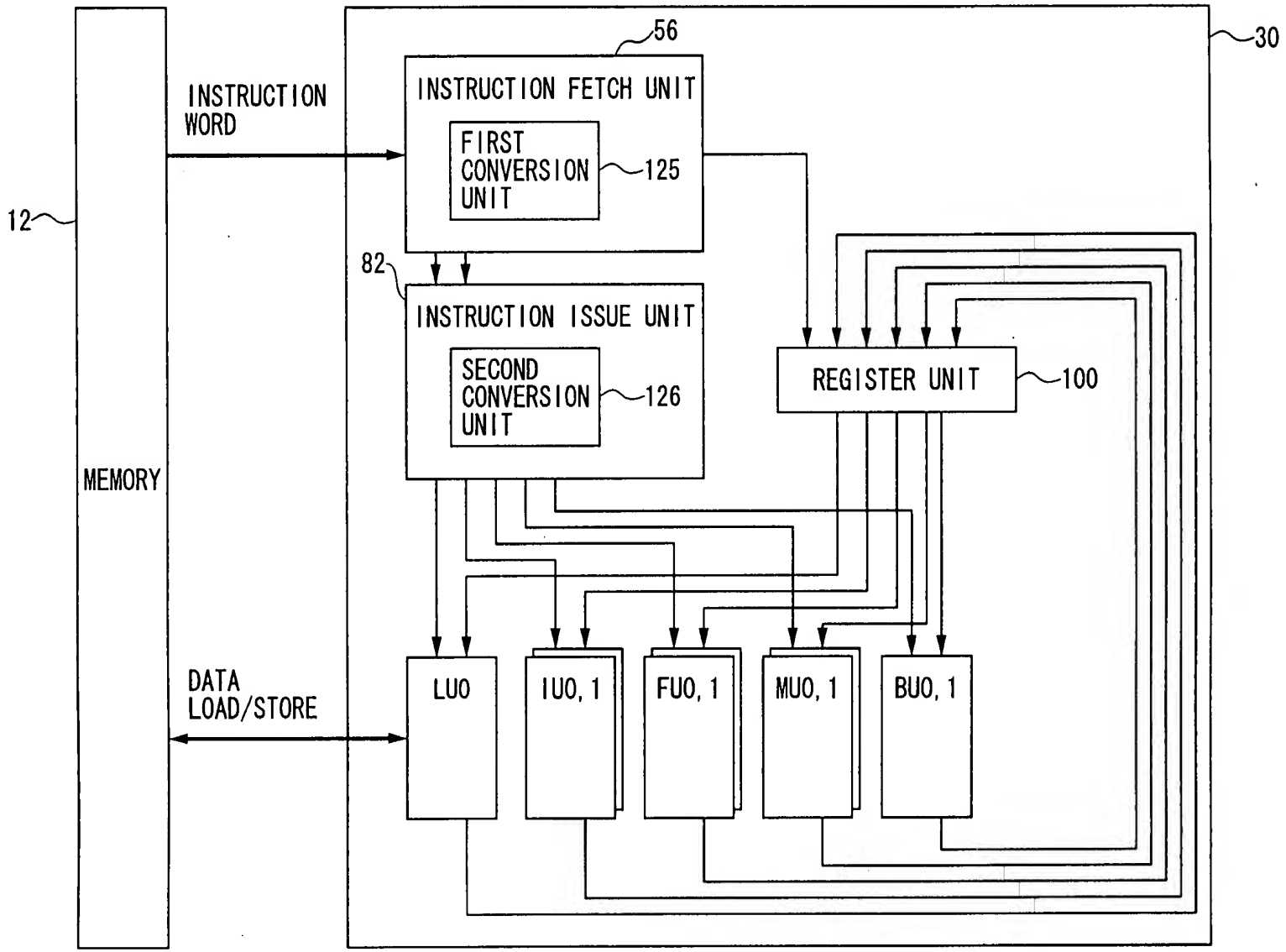

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
56
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
125
82
INSTRUCTION ISSUE UNIT
SECOND CONVERSION UNIT
126
REGISTER UNIT
100
30
LU0
IU0, 1
FU0, 1
MU0, 1
BU0, 1

FIG.25

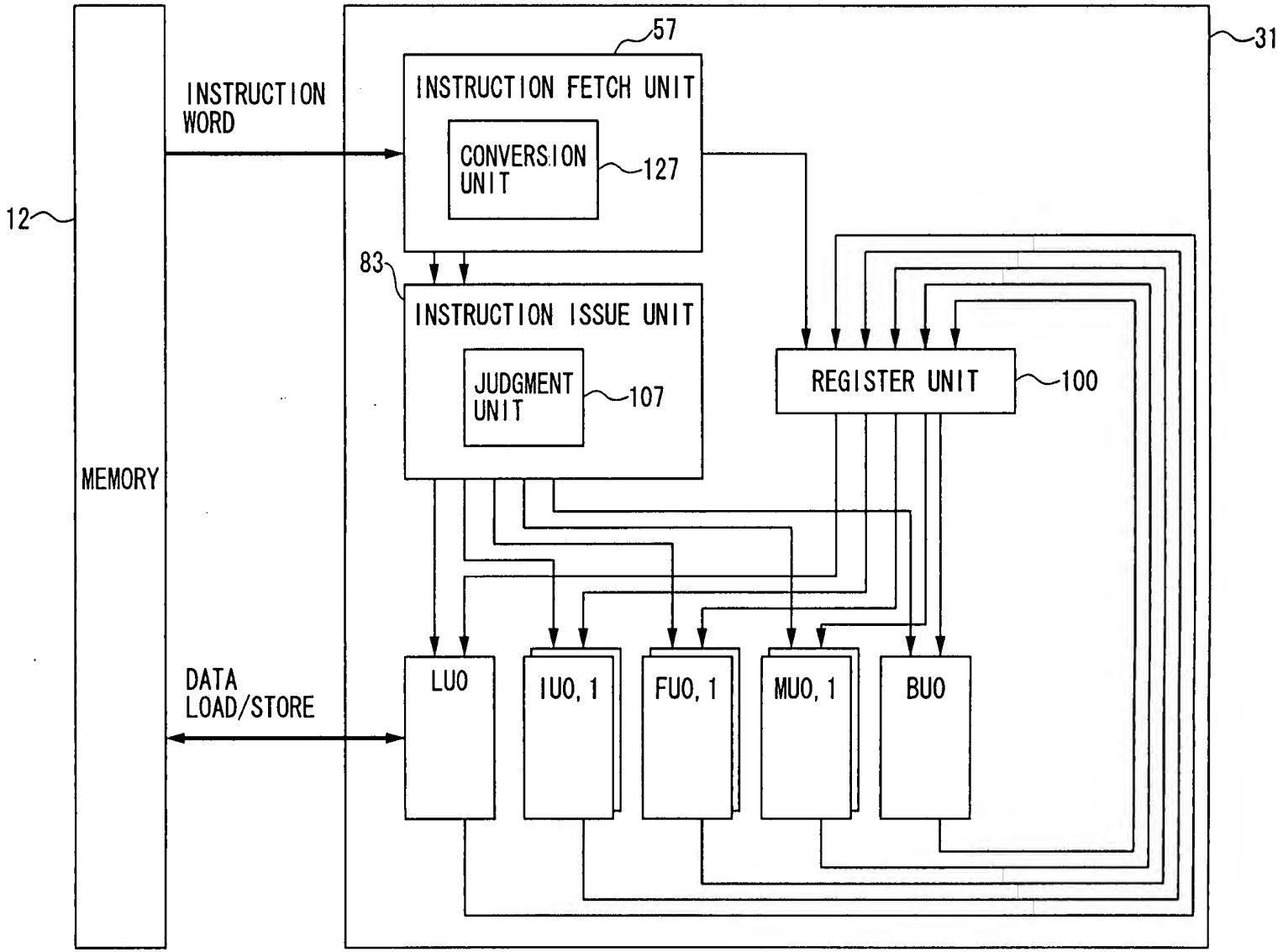

57
31
INSTRUCTION FETCH UNIT
CONVERSION UNIT
127
INSTRUCTION WORD
12
83
INSTRUCTION ISSUE UNIT
JUDGMENT UNIT
107
REGISTER UNIT
100
MEMORY
DATA LOAD/STORE
LU0
IU0, 1
FU0, 1
MU0, 1
BU0

FIG.26

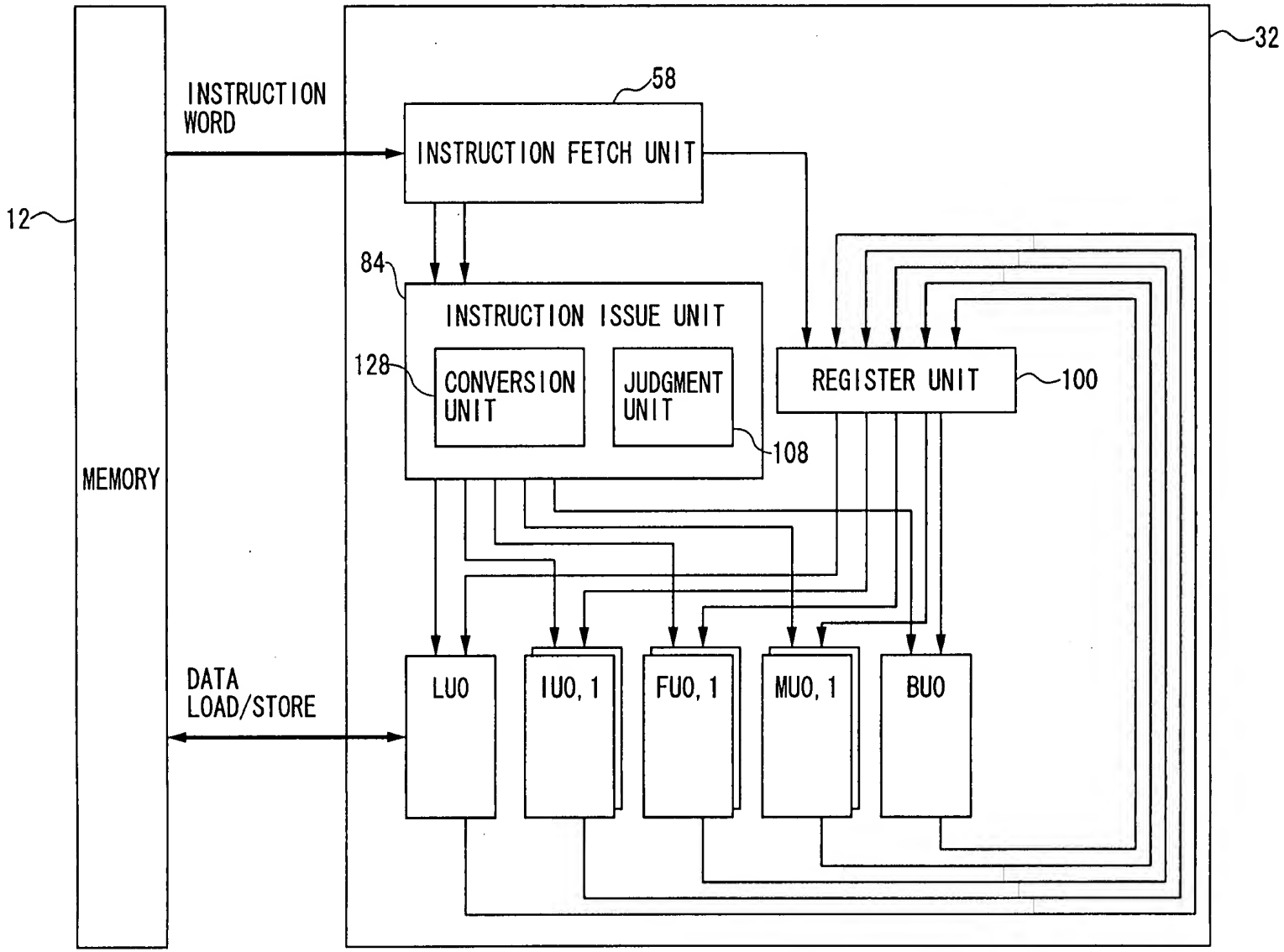

32
58
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
84
INSTRUCTION ISSUE UNIT
128
CONVERSION UNIT
JUDGMENT UNIT
108
REGISTER UNIT
100
MEMORY
DATA LOAD/STORE
LU0
IU0, 1
FU0, 1
MU0, 1
BU0

FIG.27

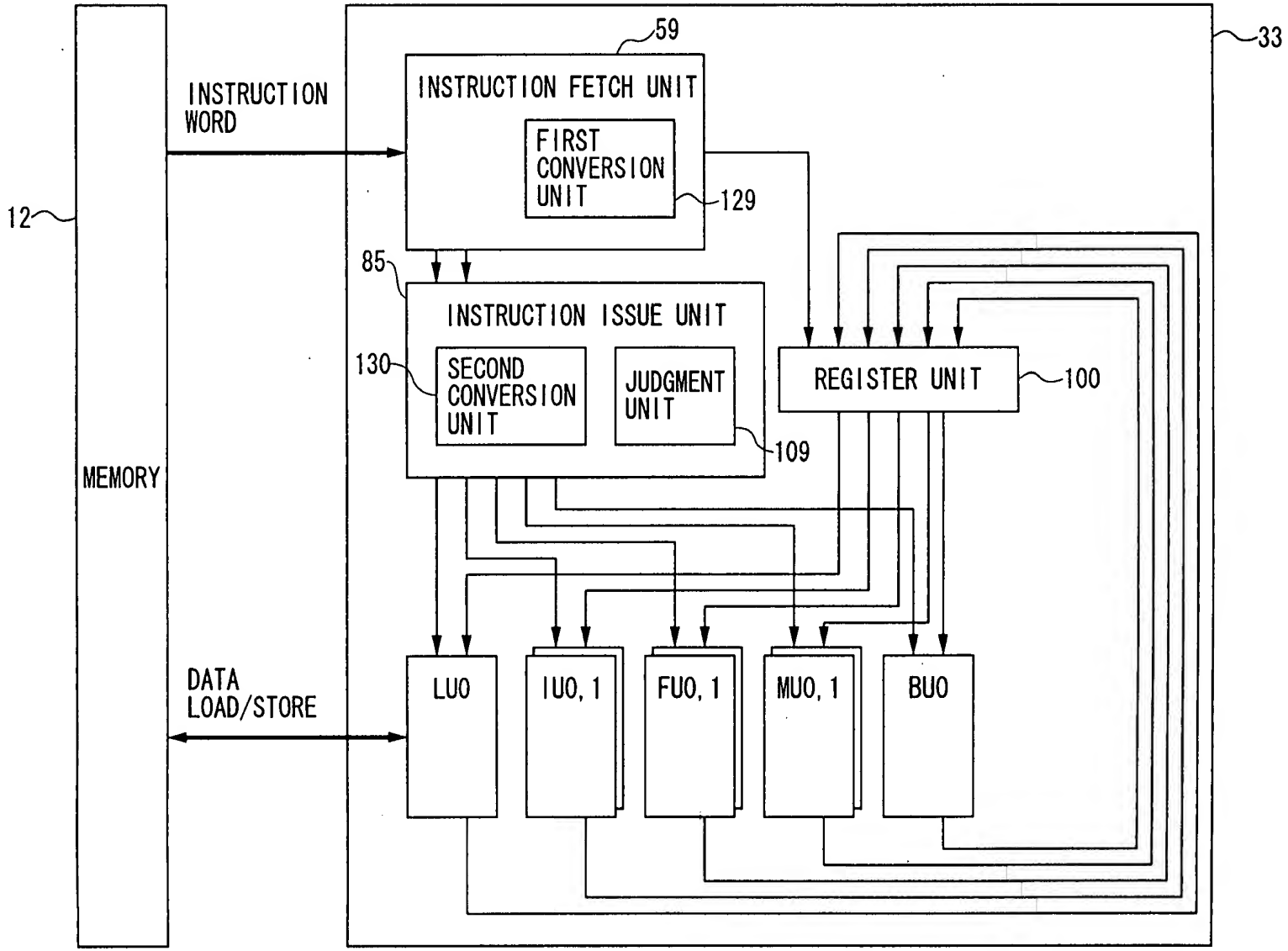

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
59
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
129
85
INSTRUCTION ISSUE UNIT
130
SECOND CONVERSION UNIT
JUDGMENT UNIT
109
REGISTER UNIT
100
33
LU0
IU0, 1
FU0, 1
MU0, 1
BU0

FIG.28

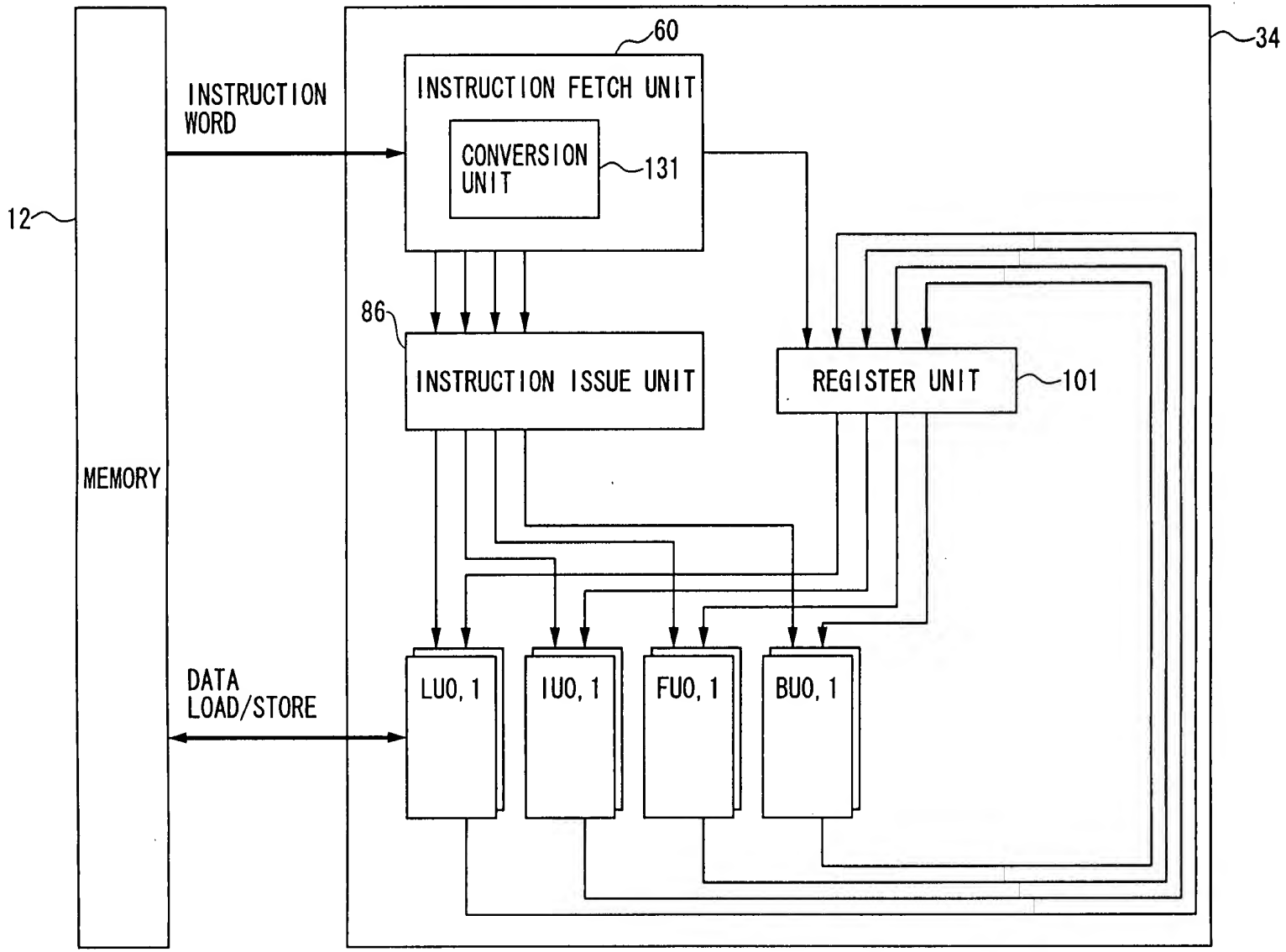

60
34
INSTRUCTION FETCH UNIT
CONVERSION UNIT
131
INSTRUCTION WORD
12
86
INSTRUCTION ISSUE UNIT
REGISTER UNIT
101
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
BU0, 1

FIG.29

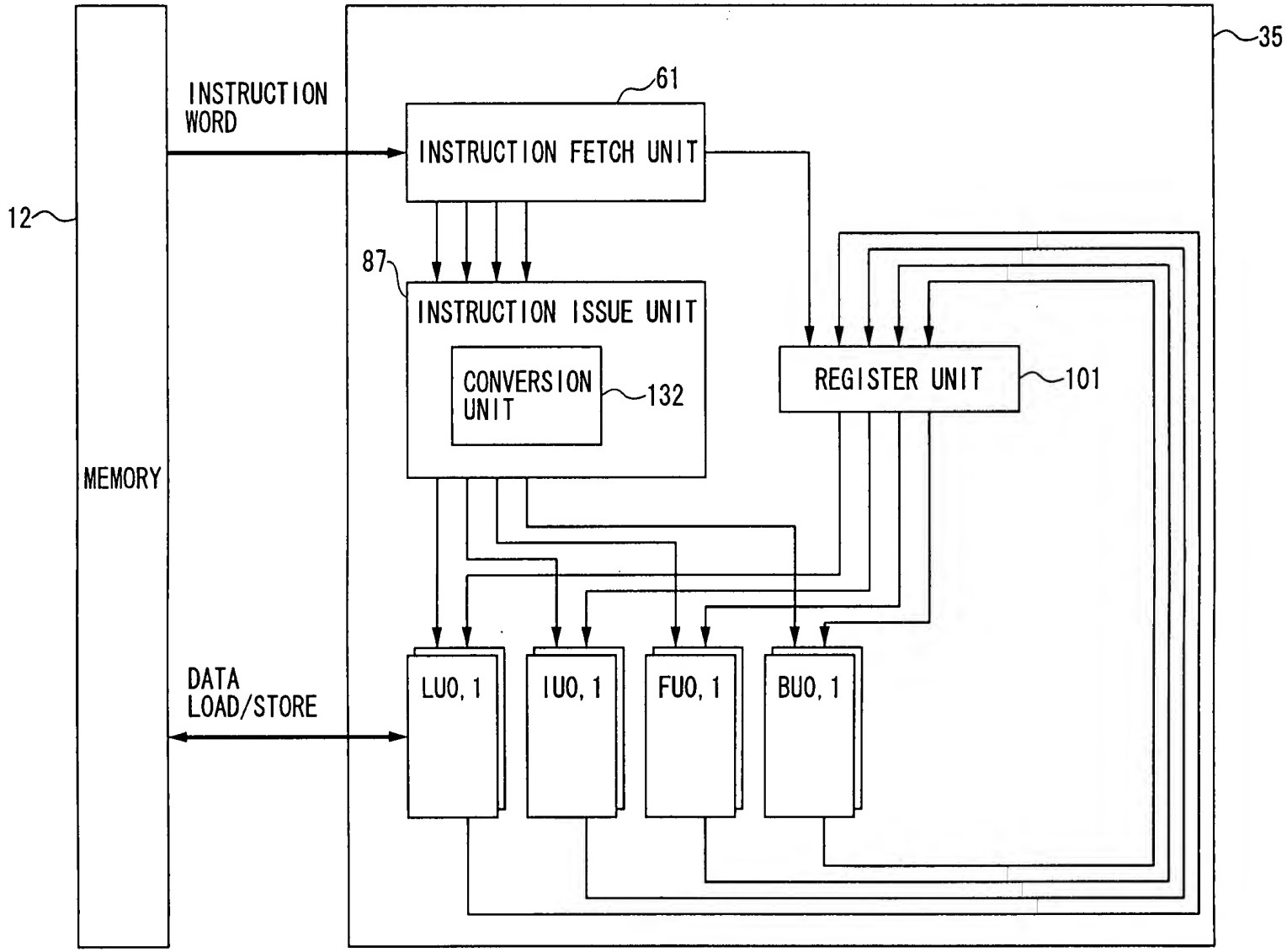

35
61
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
87
INSTRUCTION ISSUE UNIT
CONVERSION UNIT
132
REGISTER UNIT
101
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
BU0, 1

FIG.30

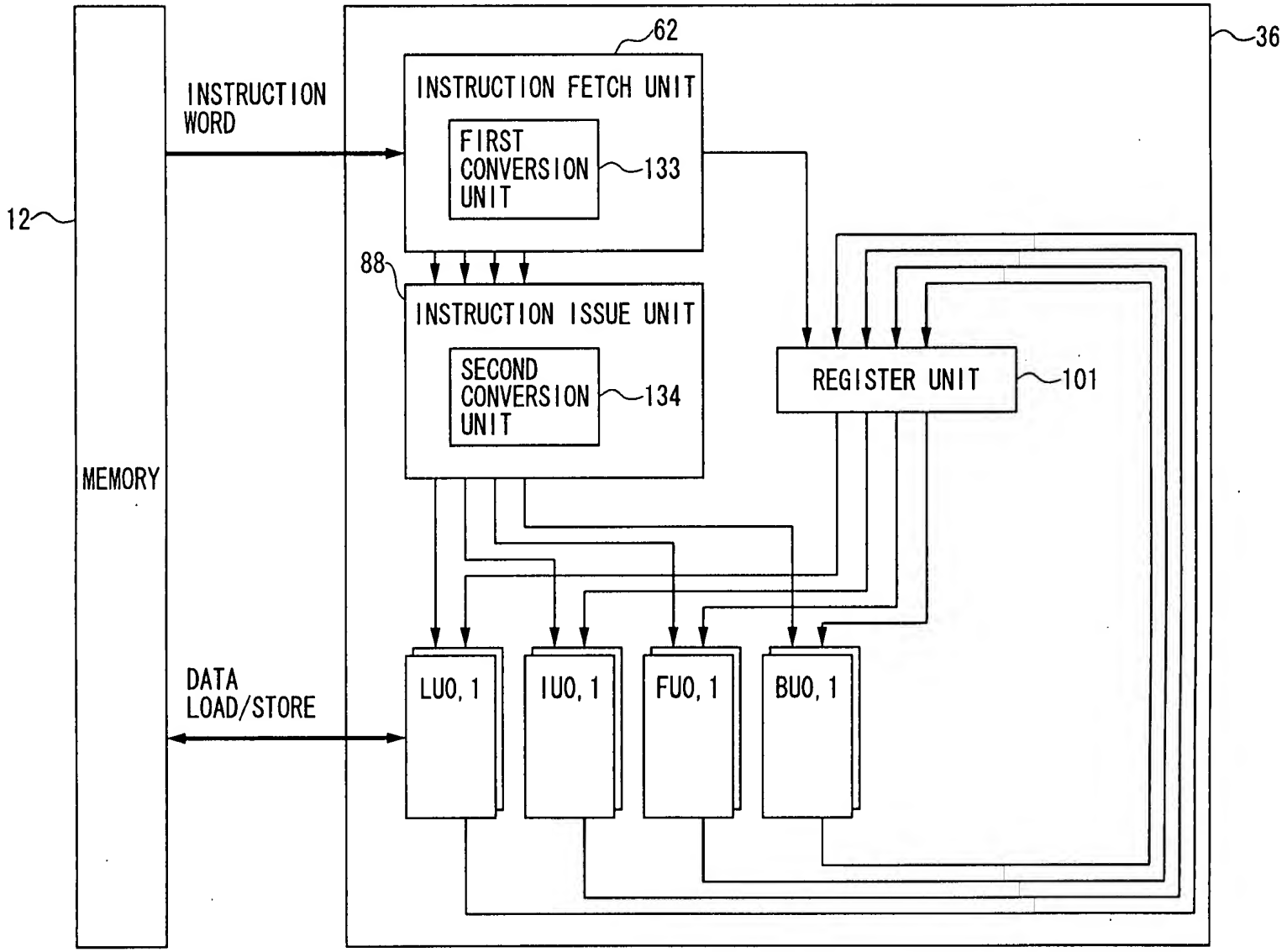

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
62
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
133
88
INSTRUCTION ISSUE UNIT
SECOND CONVERSION UNIT
134
REGISTER UNIT
101
36
LU0, 1
IU0, 1
FU0, 1
BU0, 1

FIG.31

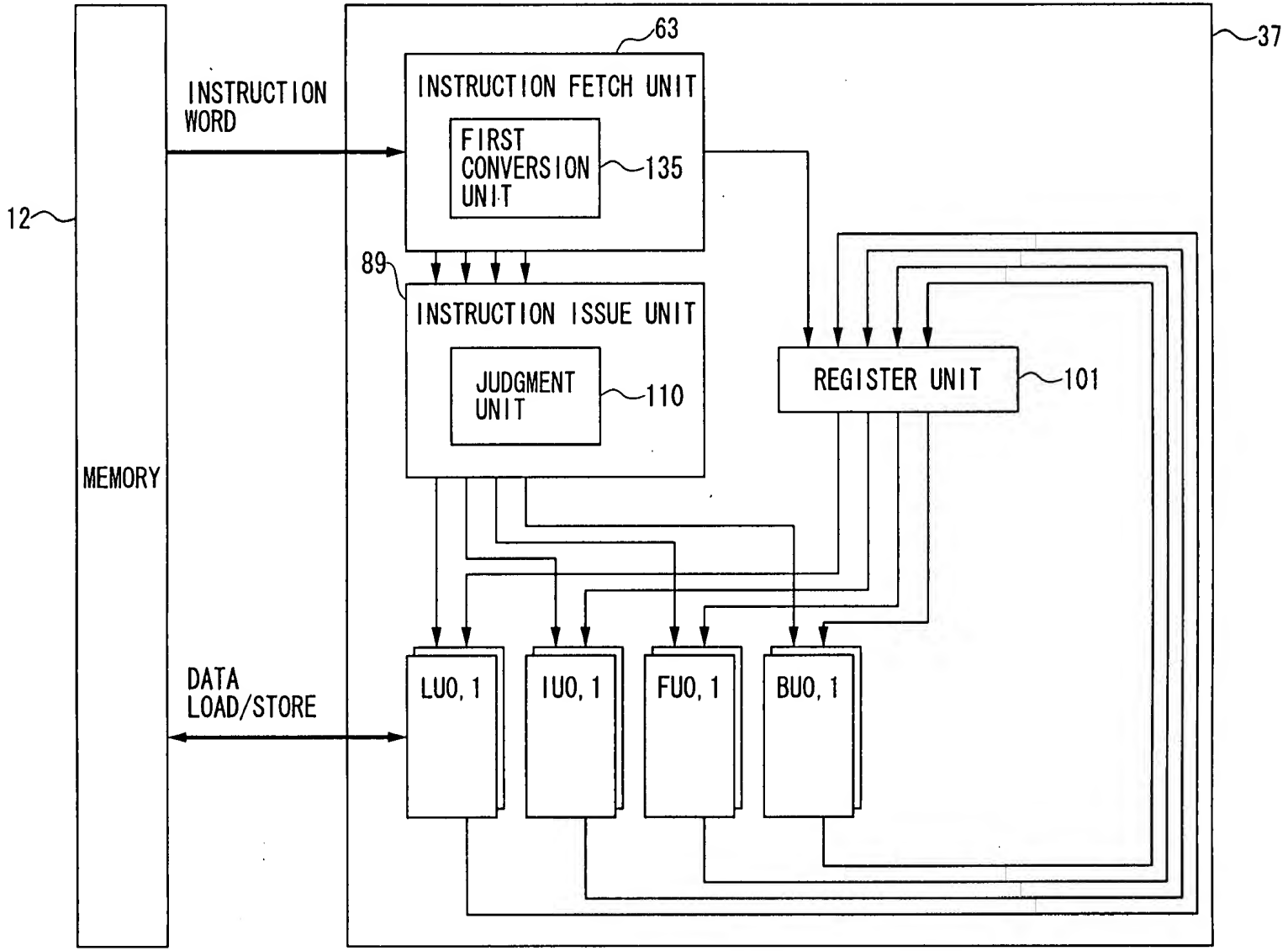

63
37
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
135
INSTRUCTION WORD
12
89
INSTRUCTION ISSUE UNIT
JUDGMENT UNIT
110
REGISTER UNIT
101
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
BU0, 1

FIG.32

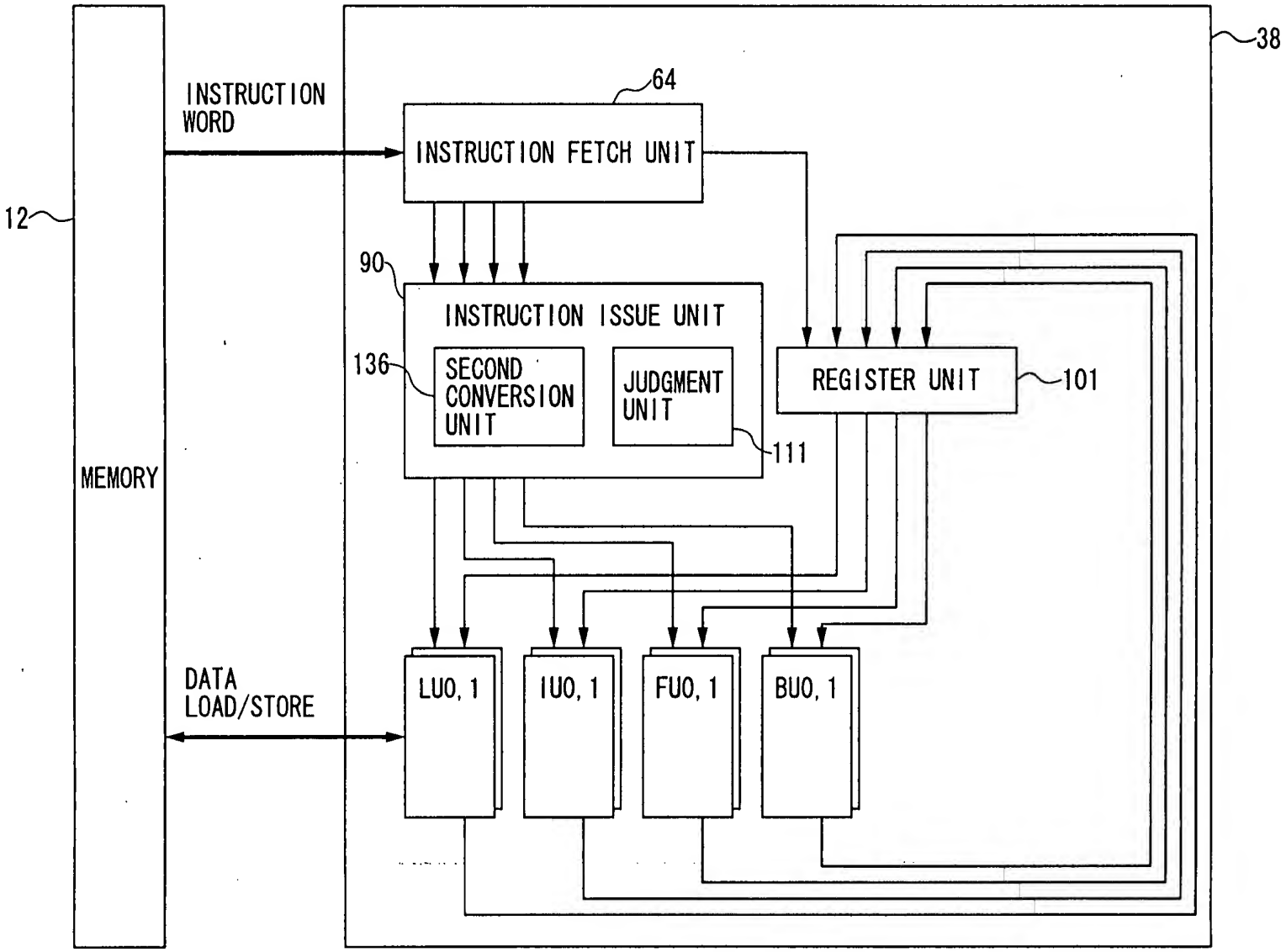

38
64
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
90
INSTRUCTION ISSUE UNIT
136
SECOND CONVERSION UNIT
JUDGMENT UNIT
111
REGISTER UNIT
101
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
BU0, 1

FIG.33

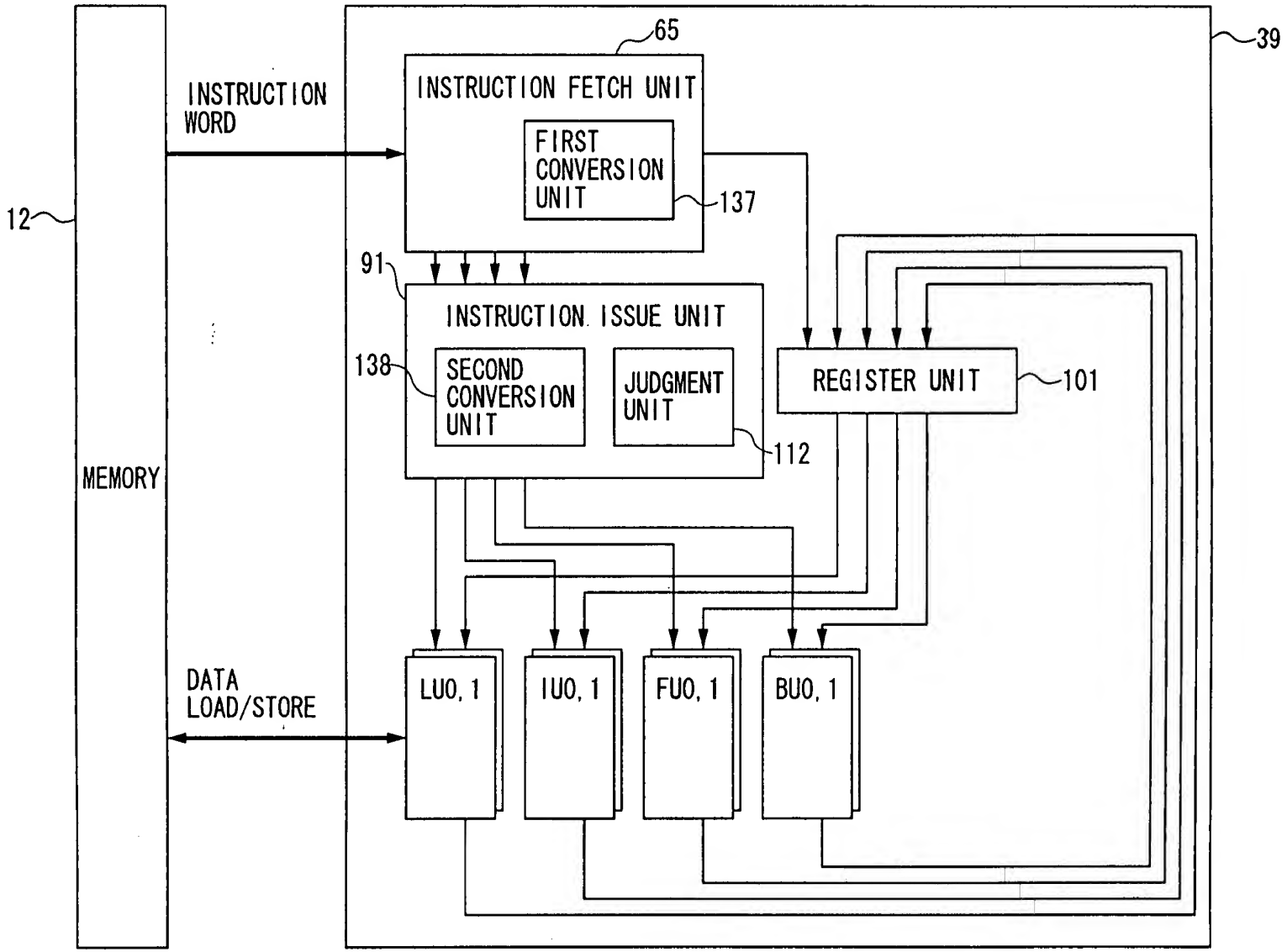

65
39
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
137
INSTRUCTION WORD
12
91
INSTRUCTION ISSUE UNIT
138
SECOND CONVERSION UNIT
JUDGMENT UNIT
112
REGISTER UNIT
101
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
BU0, 1

FIG.34

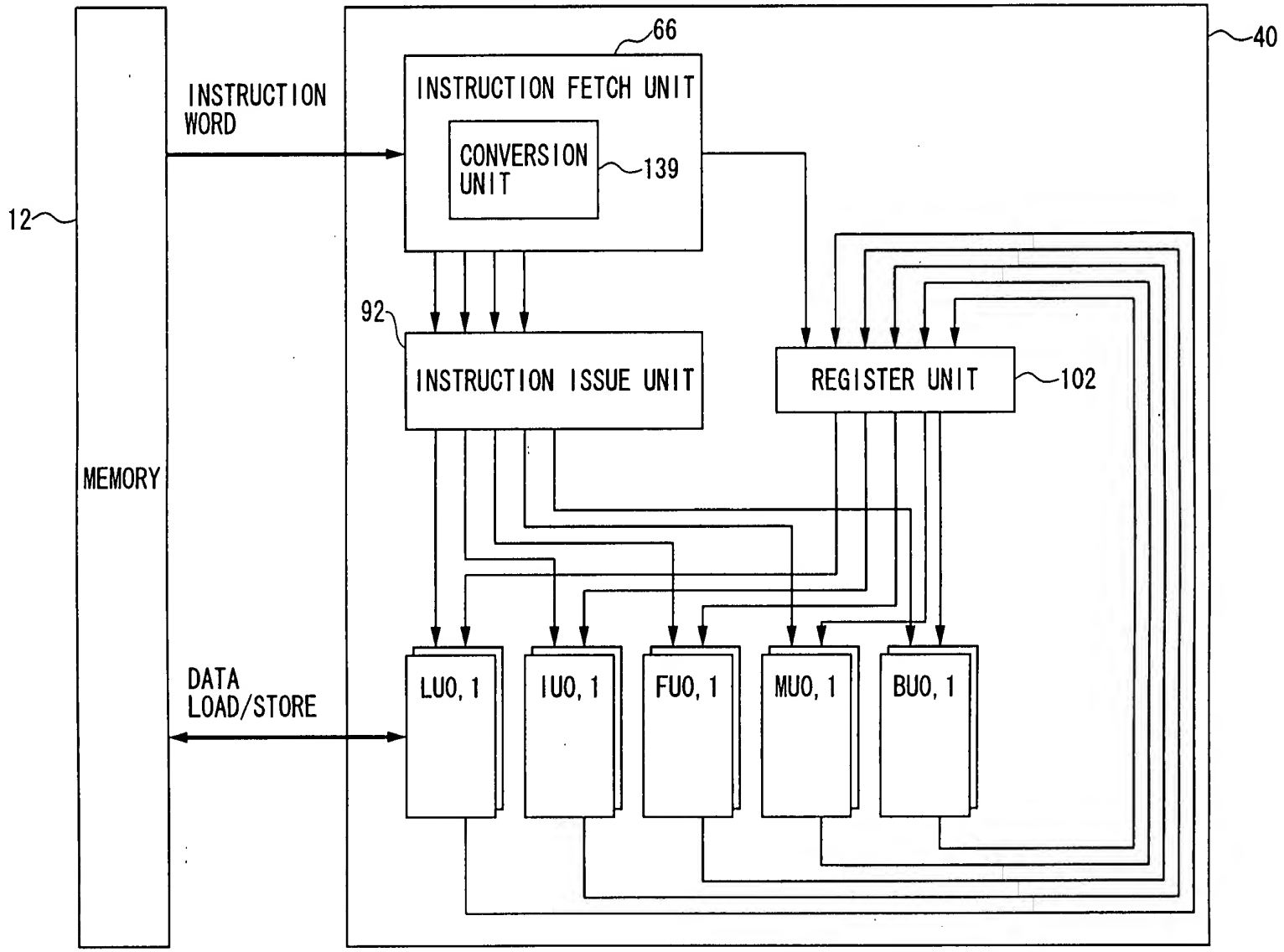

66
40
INSTRUCTION FETCH UNIT
CONVERSION UNIT
139
INSTRUCTION WORD
12
92
INSTRUCTION ISSUE UNIT
REGISTER UNIT
102
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
MU0, 1
BU0, 1

FIG.35

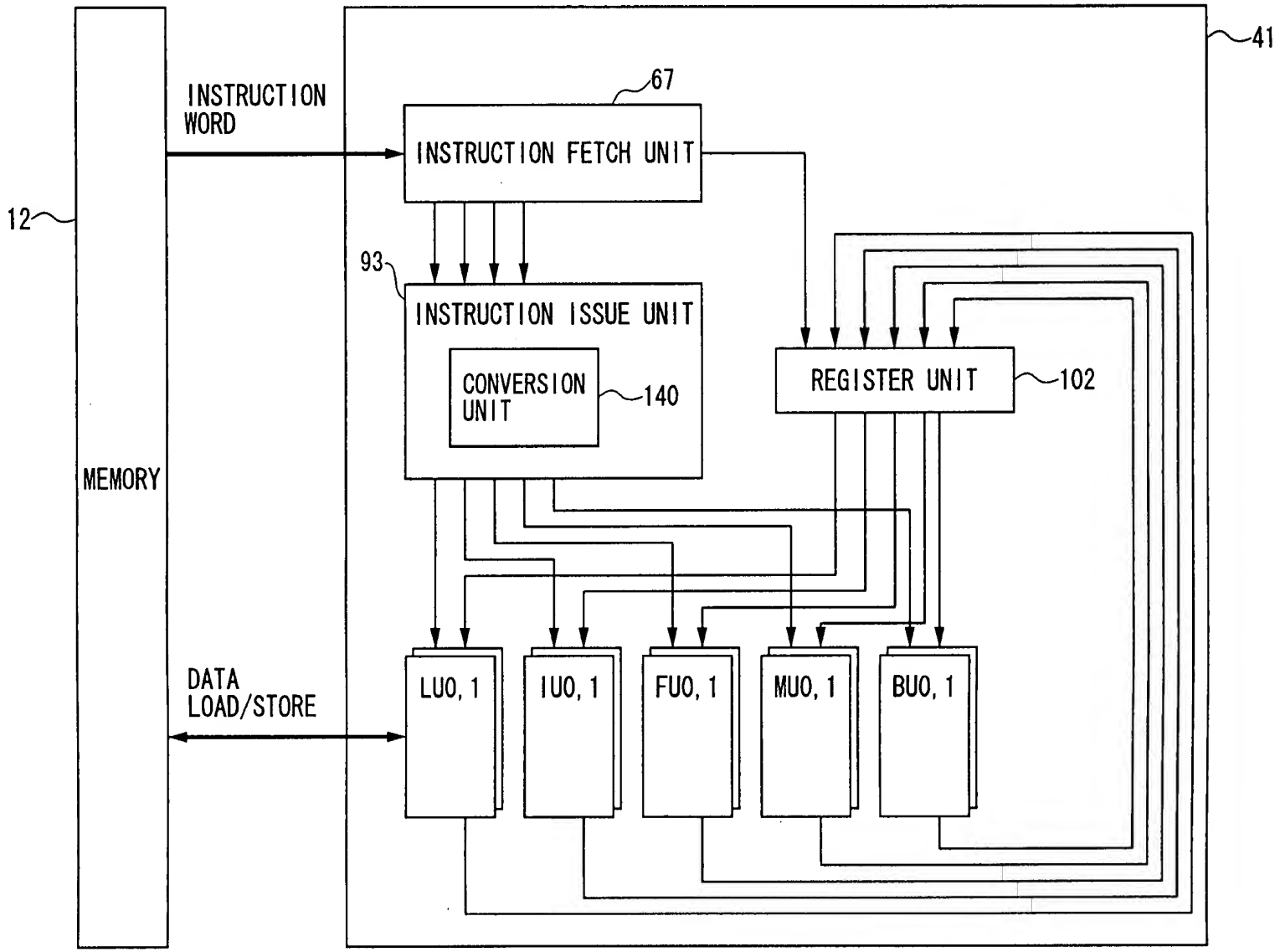

41
67
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
93
INSTRUCTION ISSUE UNIT
CONVERSION UNIT
140
REGISTER UNIT
102
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
MU0, 1
BU0, 1

FIG.36

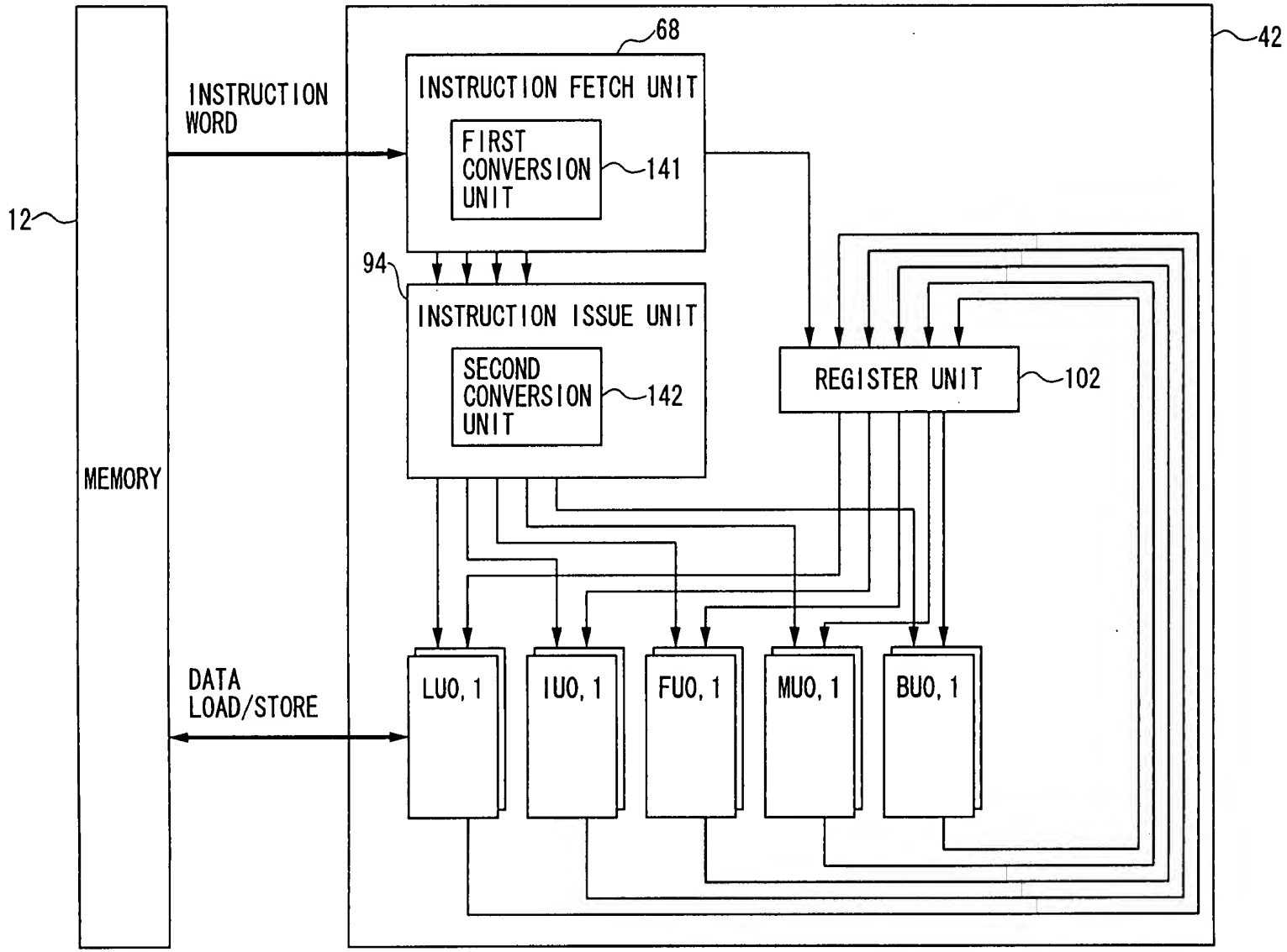

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
68
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
141
94
INSTRUCTION ISSUE UNIT
SECOND CONVERSION UNIT
142
42
REGISTER UNIT
102
LU0, 1
IU0, 1
FU0, 1
MU0, 1
BU0, 1

FIG.37

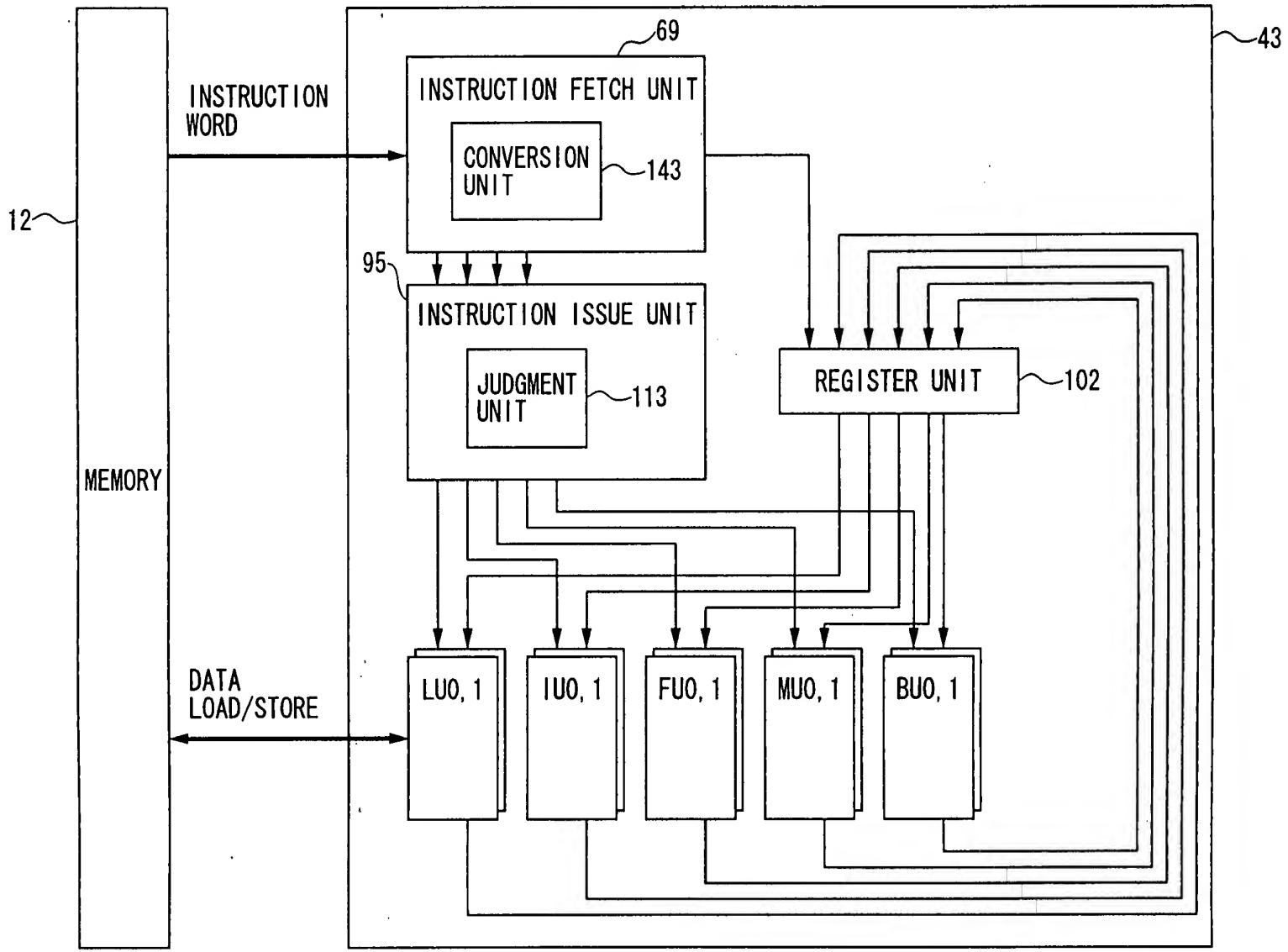

12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
69
INSTRUCTION FETCH UNIT
CONVERSION UNIT
143
95
INSTRUCTION ISSUE UNIT
JUDGMENT UNIT
113
REGISTER UNIT
102
43
LU0, 1
IU0, 1
FU0, 1
MU0, 1
BU0, 1

FIG.38

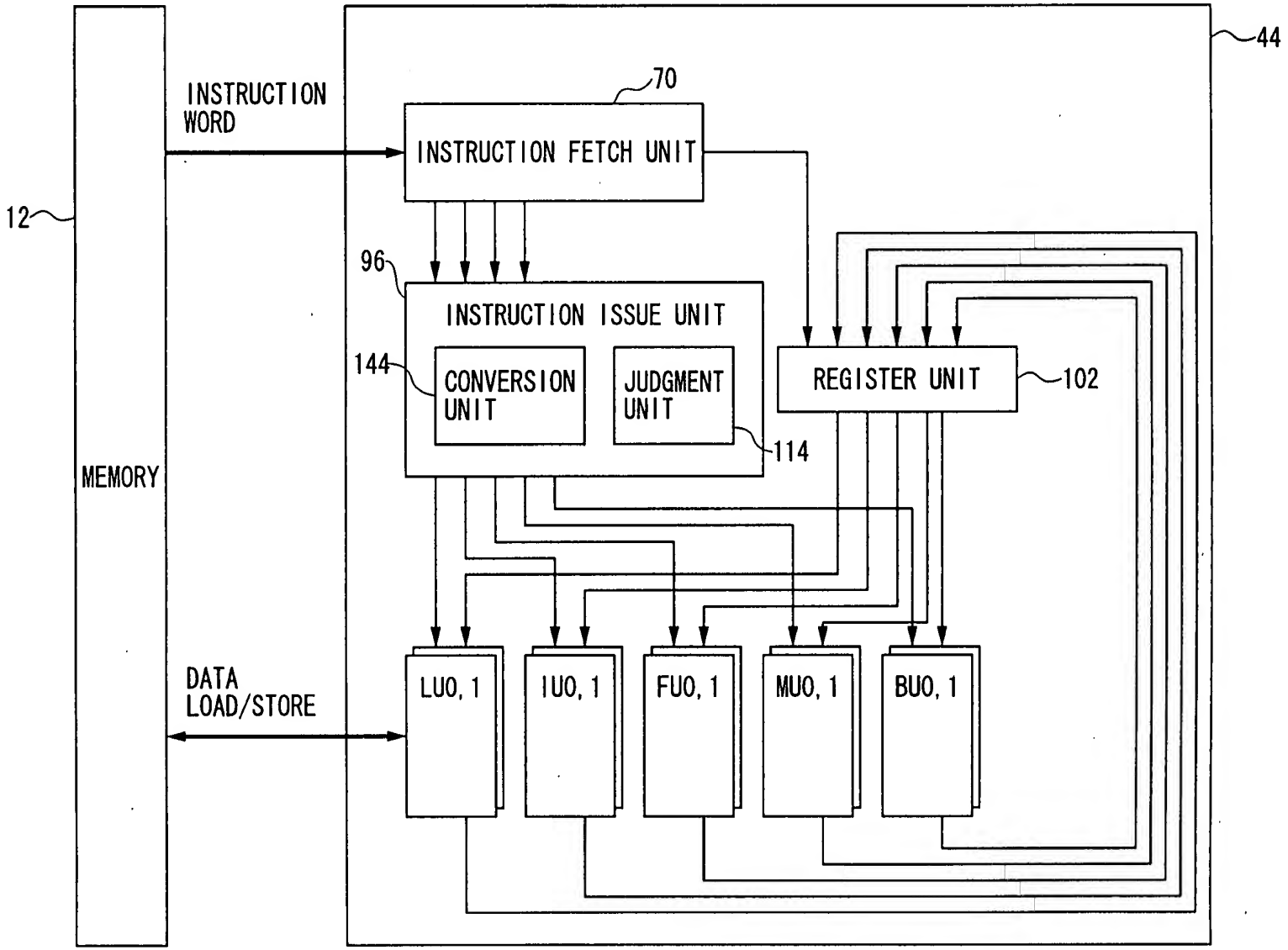
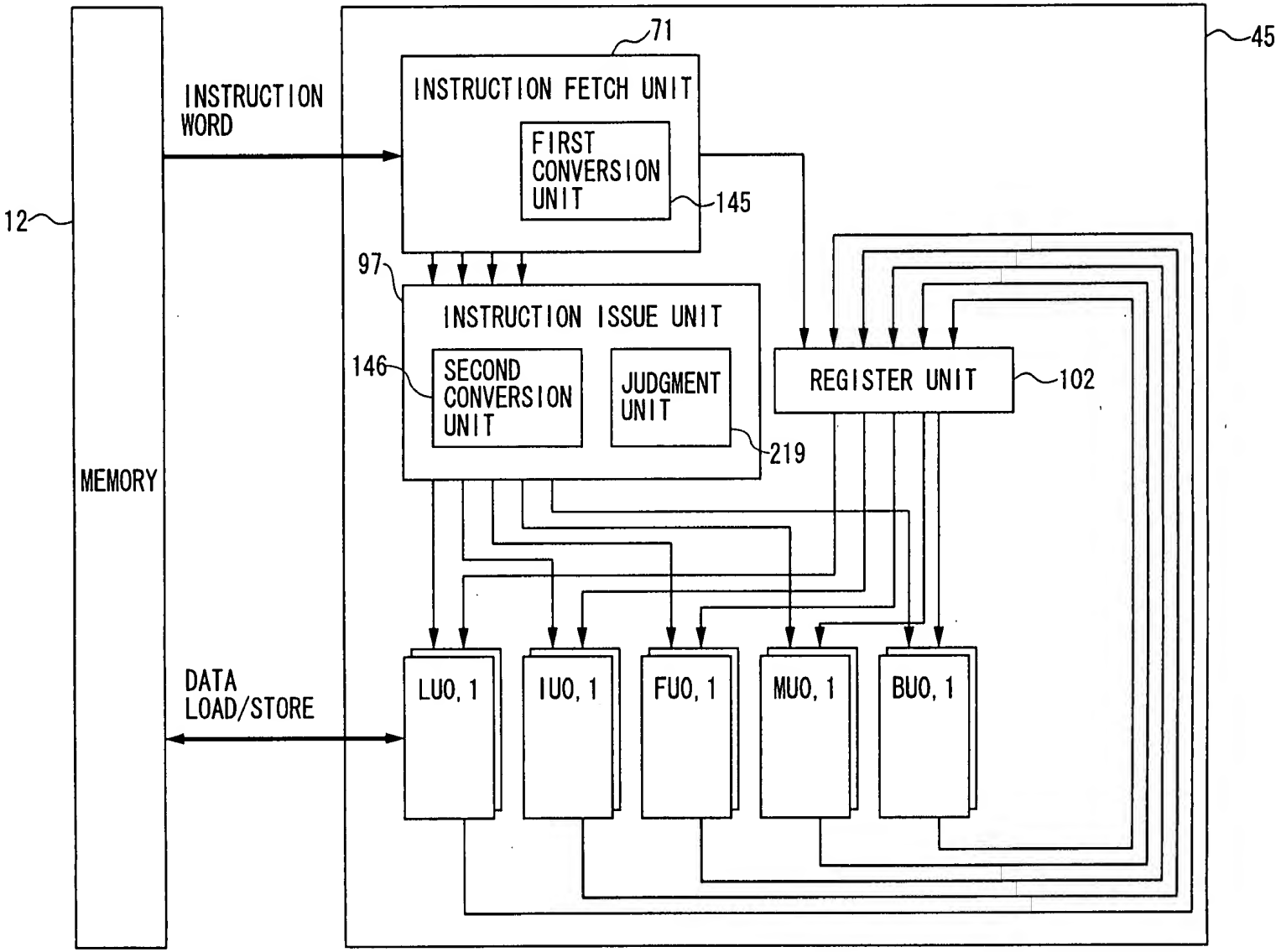

44
70
INSTRUCTION WORD
INSTRUCTION FETCH UNIT
12
96
INSTRUCTION ISSUE UNIT
144
CONVERSION UNIT
JUDGMENT UNIT
114
REGISTER UNIT
102
MEMORY
DATA LOAD/STORE
LU0, 1
IU0, 1
FU0, 1
MU0, 1
BU0, 1

FIG.39


12
MEMORY
INSTRUCTION WORD
DATA LOAD/STORE
71
INSTRUCTION FETCH UNIT
FIRST CONVERSION UNIT
145
97
INSTRUCTION ISSUE UNIT
146
SECOND CONVERSION UNIT
JUDGMENT UNIT
219
REGISTER UNIT
102
45
LU0, 1
IU0, 1
FU0, 1
MU0, 1
BU0, 1